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THE CHEMIST AND DRUGGIST

ESTABLISHED 1859

THE WEEKLY NEWSPAPER FOR PHARMACY
and all sections of the drug, pharmaceutical,
fine chemical, cosmetic, and allied industries

*Official organ of the Pharmaceutical Society of Ireland
and of the Pharmaceutical Society of Northern Ireland*

Volume 183

May 29, 1965

No. 4450

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The CHEMIST AND DRUGGIST

Volume 183

MAY 29, 1965

No. 4450

Metric System Adopted MINISTER'S STATEMENT IN COMMONS

DETAILS of the Government's decision to adopt the metric system were given in the following written statement in the House of Commons by MR. DOUGLAS JAY (President of the Board of Trade) on May 24: —

THE Government are impressed with the case which has been put to them by the representatives of industry for the wider use in British industry of the metric system of weights and measures. Countries using that system now take more than one-half of our exports; and the total proportion of world trade conducted in terms of metric units will no doubt continue to increase. Against that background the Government consider it desirable that British industries on a broadening front should adopt metric units, sector by sector, until that system can become in time the primary system of weights and measures for the country as a whole.

One necessary condition for advances in this field will be the provision of metric standards, wherever possible internationally recognised, which will enable particular sectors of industry to work in metric units. The Government have therefore asked the British Standards Institution — and the Institution have agreed — to pay special attention to this work and to press on with it as speedily as possible. The Government will, of course, take this new commitment into account in determining the amount of future grants-in-aid to the Institution. We are also considering how we can best encourage the educational work to familiarise future school generations and students in technological establishments with working in terms of metric units.

We shall also encourage the change to the metric system as and when this becomes practicable for particular industries, by seeking to arrange that tenders

for procurement by the Government and other public authorities shall be in terms of metric specifications.

Practical difficulties attending the change-over will, of course, mean that this process must be gradual; but the Government hope that within ten years the greater part of the country's industry will have effected the change. To this end they propose to establish a small standing joint committee of representatives of Government Departments and industry to facilitate the removal of obstacles and to keep under constant review the progress which is being achieved.

The Government will keep in touch with Commonwealth Governments on this matter.

Pharmaceutical Quality

W.H.O. PROPOSES MORE CONTROL

MEASURES designed to improve the quality control of pharmaceutical preparations that move in international commerce have been recommended by the committee on programme and budget of the World Health Assembly, meeting in Geneva. The text of the resolution submitted to the Assembly "invites governments to take the necessary measures to subject pharmaceutical preparations, imported or locally manufactured, to adequate quality control." It also requests the director-general (Dr. M. G. Candau) to assist member states in the development of their own laboratory facilities; to continue to study methods of controlling

in the country of origin the quality of pharmaceutical preparations intended for export; and to pursue the establishment of internationally accepted principles and specifications for the control of the quality of pharmaceutical preparations. He is requested to report to the executive board on the possibilities of the Organisation's playing a more active rôle in the quality control of pharmaceutical preparations. In a report to the Assembly the director-general states that smallpox can be conquered throughout the world in ten years' time at a cost of \$23-31 millions. Twelve countries have eradicated smallpox since the world campaign was launched by the W.H.O. in 1959.

1,081 Years of Service

PRESENTATIONS TO VETERANS

INFORMAL presentations to twenty-nine members of the staff of Maws Pharmacy Supplies, Ltd., were made at Barnet on May 13. In a relaxed and friendly atmosphere Mr. Denys Maw presented gold watches to those members who had been with the company for more than twenty-five years. (Six had been with the company for fifty years or more.) Recalling memories of an earlier age, Mr. Maw voiced the appreciation of the directors for the continued fine tradition of service. Loyalty had always been a feature of the company over the years, and was the backbone of its prosperity. Prominent among those present was Mr. C. H. Pleasants, who joined the company in 1915. Progressing from office boy to department manager and subsequently warehouse manager, Mr. Pleasants was made a director in 1956. In recent years he controlled the Felstead Manufacturing Co., which with Maws Pharmacy Supplies, Ltd., are subsidiaries of the parent company S. Maw, Son & Sons, Ltd. Five members of the representative staff received presentation watches, including Messrs.



LONG - SERVICE AWARDS : Employees of the Maws group who received awards for long-service with the company (see above) with directors Dennys and David Maw. At right : Mr. Pleasants receives his clock from Mr. Dennys Maw.

V. E. Peacock and P. A. Kain, who have both been with the company for over fifty years. Mr. Peacock is well known among hospital pharmacists and chemists in the Home Counties, and Mr. Kain has been calling for many years on his friends in retail pharmacy throughout Middlesex. Three representatives who have been with the company for over twenty-five years and who also received presentations were Messrs. J. Deeprose, who covers North London, V. L. Trevitt of Northern Ireland, and S. J. Johnson, who represents Maws in Bedfordshire, Hertfordshire and Buckinghamshire. Total service of the veterans was 1,081 years.

Statutory Committee

EIGHT HEARINGS ENDED; ONE DELAYED

THE Statutory Committee, which met in London on May 11, was concerned with nine resumed hearings. In eight of them the Committee decided to take no further action against seven pharmacists and the director of a corporate body. In the ninth the superintendent of a corporate body was warned that the company had had "a narrow shave" from being struck off the register. There was no doubt, said the chairman, that considerable irregularities had occurred in the early part of the twelve months during which the

case had been adjourned, and considerable lack of co-operation with the Society's inspector. The proceedings would be adjourned until the first week in October. The Committee would expect the company to allow the inspector to visit the premises whenever he felt fit, and the directors to give real and not half-hearted co-operation.

FORTHCOMING INQUIRIES

THE Statutory Committee of the Pharmaceutical Society is meeting at 17 Bloomsbury Square, London, W.C.1, at 10.30 a.m., on June 9 to consider information and evidence from which it appears that (1) a member of the Society has been convicted of offences under the Pharmacy and Poisons Act, 1933; (2) a member of the Society has been convicted of stealing money from his employers and of making false entries in cash statements with intent to defraud; (3) a corporate body, carrying on business as an authorised seller of poisons, was convicted of an offence under the Pharmacy and Poisons Act, 1933, and the superintendent pharmacist director may have been guilty of misconduct; (4) a corporate body, carrying on business as an authorised seller of poisons, was convicted of offences under the Pharmacy and Poisons Act, 1933, and the Therapeutic Substances Act, 1956, and the superintendent pharmacist director may have been guilty

of misconduct. The Committee is also to consider the decisions to be given in two inquiries adjourned from June.

Central Health Service

ADVISORY COMMITTEE APPOINTMENTS

DR. K. R. Capper (director of the Pharmaceutical Society's department of Pharmaceutical Sciences), has been appointed a member of the Pharmaceutical Standing Advisory Committee to the Central Health Services Council until March 31, 1966. The following have been reappointed to serve on the Committee until March 31, 1968:—Messrs. T. C. Denston and F. H. Oliver and Professor A. Wilson.

Test Market and N.P.U.

SUNDERLAND BRANCH TO TAKE PART

THE Sunderland Branch of the National Pharmaceutical Union, at its annual meeting on April 29, approved in principle a scheme for co-operating with a test-marketing company (Test Marketing Services, Ltd.), in the trial of new products. Results will be available to all N.P.U. members and the scheme is to run for an initial period of twelve months, after which its success will be assessed.

IRISH NEWS

THE REPUBLIC

Clare Association

INAUGURAL DINNER

"I AM satisfied that a new Health Act that will recognise the importance of the community pharmacist is only a matter of time," declared the president of the Pharmaceutical Society of Ireland (Mr. J. P. O'Donnell) addressing the inaugural dinner of the Clare Pharmacists' Association in Ennis on May 10. The people, he said, were entitled to a comprehensive pharmaceutical service. It was to be regretted that many avenues of uncontrolled medications were available to the public. That aspect of the profession must be taken into account in any new Health Act. The president paid tribute to the former Minister for Education (Dr. P. J. Hillery) for recognising the importance of pharmaceutical education and for having sanctioned a grant of £11,000 per annum towards education of pharmaceutical students. Mr. Patrick Smith (secretary of the Pharmacists' Association) said he had no doubt that any future Health Act must give the patient choice of doctor and chemist. The Act would also have to take into account the sale of drugs, as at present the public could pick them up in stores and supermarkets. Mr. D. J. Kennelly (a former president of the Pharmaceutical Society of Ireland) gave an address on the toxicity of drugs. Among those present were the registrar (Mr. J. C. Coleman) and Mrs. Coleman; Mesdames O'Donnell and Kennelly.

IRISH BREVITIES

THE REPUBLIC

THE name of Professor R. F. Timoney (dean of the College of Pharmacy) was inadvertently omitted in our recent report of pharmacists re-appointed to *Comhairle na Nimheanna* (Poisons' Council) (C. & D., May 1, p. 438).

CHANGES IN SHOP HOURS

Proposals for an overall review

THE Government intends shortly to publish proposals for a comprehensive review of the law relating to shop hours. That information was given by MR. GEORGE THOMAS (Joint Under-Secretary of State, Home Office) during the Third Reading debate on the Shops (Early Closing Days) Bill.

Opening the debate MR. R. E. WINTERBOTTOM said that in the main the Bill did not seek to alter the principle of the application of the half-holiday for shop workers, but the existing law tended "towards perplexity and in certain cases the Bill will help towards simplification." If the Bill were accepted it would transfer the right of fixing the early closing day from the local authority to the trader. Forty years ago the idea of a five-day working week in shops had not been thought of. Today it was a practical proposition and had been enjoyed in innumerable instances. Because of the 1950 Act and the strict legal interpretation that had been placed upon it, many agreements covering the application of a five-day working week in shop life were being held up. The proposed Bill did not remove any of the existing rights, but it opened the door to the modern practices in the world of distribution. He assured members of the House of Commons that the Bill did not affect shop hours from the point of view of the general public. It merely made provision for assistants to have the "sort of days off that apply throughout industry."

Some, said MR. THOMAS, had been afraid that the Bill could lead to an expansion of six-day trading, that was not so. The Shops Act, 1950, re-

quired every shop, with certain exceptions, to be closed not later than 1 p.m. on one weekday in every week.

There had, however, been a move by certain companies to increase the number of six-day trading areas in accordance with section 1 (4) of the 1950 Act. He thought it appropriate to outline some of the dangers of six-day trading. "It seems logical that, if shops are to be open for longer hours without any overall increase of trade, there can only be increased overheads and wages bills, which will be passed on to the consumer in the form of increased prices. Again, since it is only reasonable that employees in shops—and I include the shop managers—should enjoy along with the rest of the working community, the leisure arising from the increased adoption of the five-day working week. If the trader is then compelled to operate a shift system, or employ an increasing number of temporary staff in order to keep his shop open for longer hours, this appears to me to be making excessive demands on our available labour resources. I want to sound a note of warning against too hasty expansion into six-day trading. There may well be isolated cases where this is necessary in the public interest, but I cannot believe that such cases are common."

It did not follow that greater flexibility in trading hours was not needed. That was one of the aims of the Bill.

Mr. Thomas later disclosed that the Government hoped to publish before the Summer recess the comprehensive review of the law relating to the hours of trading.

NEWS IN BRIEF

SALES of the British Pharmacopœia, 1963 to April 30 numbered 27,205. Number of copies of the Addendum, 1964 sold totalled 6,498.

Mr. T. J. Parry, M.P.S., has been elected mayor of Stockport, Ches. Mayoress will be his daughter, Miss S. M. J. V. Parry, M.P.S.

BRITISH Rubber Hot Water Bottle Manufacturers' Association have re-elected Mr. L. B. Cracknell *Chairman* for 1965-66.

THE Society of Glass Technology has elected Mr. Alec W. Clark its *President* in succession to Professor R. W. Douglas.

THE Ministry of Agriculture, Fisheries and Food has revised advisory leaflet 476, "Chemical Weed Control in Horticultural Crops" (H.M. Stationery Office, price fourpence).

THE granting of Fellowship awards were announced by the CIBA Fellowship Trust on May 18 to Messrs. J. A. Connor, B. T. Kilbourn, H. V. Wong, F. R. Riddell, N. Drysdale and B. T. Golding for post-doctoral studies.

THE National Union of General and Municipal Workers, one of Britain's largest trade unions, has formed a trading company to offer goods and services at reduced prices to its members.

THE Minister of Health and the British Medical Association have reached "a substantial measure of agreement" in their discussions on family doctors' pay. A joint statement on the present position is expected shortly.

THERE were 1,457 cases of human plague and 121 deaths recorded in the world in 1964, according to notifications received by the World Health Organisation. Cholera increased by more than 16,000 to 81,400 reported cases.

DR. James Taylor is to be presented with the Society of Chemical Industry's Medal for 1965 during the annual meeting in Cardiff in July. He will deliver a lecture, "The Human Element in the Chemical Industry" on July 14.

SPORT

Cricket

ALLEN & HANBURYS, LTD., sales managers' XI v. BIRMINGHAM PHARMACEUTICAL ASSOCIATION's cricket section at Ware, on May 23. Allen & Hanburys' total 127 (R. Fell, 24); Birmingham, 129 for 9 (J. Punchon, 39). Birmingham's winning run was scored off the fourth ball of the last over.

LOCAL OFFICERS

PHARMACEUTICAL SOCIETY

Edinburgh and South-eastern Scottish.—*Chairman*, Miss D. I. L. Locker; *Vice-chairman*, W. S. Lawrie; *Treasurer*, J. H. Henderson; *Secretary*, D. MacMurray, 39 Little Road, Edinburgh, 9 (Telephone: Liberton 2245).

Swansea and West Glamorgan.—*Chairman*, A. R. Jenkins; *Vice-chairman*, M. L. Paster; *Treasurer*, G. R. Brown; *Secretary*, G. Paster, 9 Graigwyd Road, Cockett, Swansea.

GUILD OF PUBLIC PHARMACISTS

London.—*Chairman*, Miss J. Allen; *Vice-chairman*, J. D. Fennell; *Treasurer*, Miss E. M. E. Brighton; *Secretary*, E. H. Brockis, St. Olave's Hospital, Lower Road, London, S.E.16.

TOPICAL REFLECTIONS

By Xrayser

Election result

The result of the poll for the election of seven members to the Council of the Pharmaceutical Society suggests that the unrest of recent years has given way to a feeling that must be construed as a vote of confidence, both in the Council generally and in those who offered themselves for re-election. It seems that the electorate, having had its way in the rolling of heads, is now prepared to give the present membership the opportunity of settling down and proving itself. The fact that the first five places were occupied by the retiring members seems to endorse that view, and it is possible that only the retirement of the popular Mr. W. Heseltine allowed Mr. T. Reid to return to the scene after one year in the pharmaceutical wilderness. The difference between his success this year and last year's failure was a mere 200 votes, and that can scarcely be regarded as a resounding vote of confidence, but the margin, though not so deep as a well, nor so wide as a church door, is enough and will serve. It is of interest that the total of votes cast, amounting to 11,435, was a mere fourteen over last year's figures. Mr. W. M. Darling, who stormed the citadel three years ago and topped the poll, remains at the head with the same solid support of over 5,000 votes, and the others have retained and in some cases increased their vote. But securing a vote of confidence at this stage is not enough, for the membership will be anxious to see that that confidence has been wisely bestowed. I congratulate Mr. W. A. Beanland, who has broken into the ring at the first time of asking—no mean accomplishment in a year in which the five retiring members have been re-elected. I am sure he carries the good wishes of even more than the 3,746 members who endorsed his statement of policy in the only manner open to them. He takes his seat at an important time with a policy that is directed towards the establishment of professional outlook and practice. There never was a time in the whole of our history when we were more in need of clear thinking combined with idealism to lift pharmacy above the distressing "low" we have recently seen.

Culture

The Franco-British Pharmaceutical Conference, in its meeting at Torquay, has been discussing the advantages of a liberal education in the production of the complete pharmacist. There is little doubt that the pressure arising out of the increase in scientific knowledge tends to canalise the student's outlook and habits. That is not peculiar to pharmacy, for it has long been a matter for concern that the specialist in any subject comes to resemble a horse in blinkers, and it is not a simple matter consciously to graft other subjects to a specific course. By the time the student has embarked on his course he has his compass set on his destination, and he is unlikely to be sidetracked from his landfall by anything lying off the route. The time to encourage the broad outlook, and to open up the way to attractive and strange lands, is before entry into the career of one's choice. Then all things will be opened unto the student, provided he possesses the inquiring mind. But of course there are limits. It is useless to prescribe a course in music for the boy who was born too near the wood and is "timmer-tuned." The ability to express oneself clearly is, however, a *sine qua non* no matter what the career.

Earlier Pharmacists

I have read at great length some of the papers presented to meetings of pharmacists a century or more ago, and have been much impressed by the polish they display. Here is no faltering composition. Here, for all to see, is a complete grasp of the subject and a fine style of composition that reads extremely well today. Even later, as I have remarked on other occasions, there was a generation of pharmacists—perhaps unskilled in the higher mathematical and scientific fields—who exhibited a culture, knowledge and breadth of vision seldom found today in the highly trained product of the university. How all that was acquired when leisure was so scant must remain one of the mysteries.

Uproar at Society's Annual Meeting

MOTIONS WITHDRAWN FOR DISCUSSION AT SPECIAL MEETING LATER

THE motions on the agenda for the annual meeting of the Pharmaceutical Society of Great Britain, held in London on May 19, came in for heated discussion and much hostile comment from a section of the membership. Eventually the evening's adjourned meeting reached such a state of confusion that the president (MR. C. W. MAPLETHORPE) decreed its further adjournment.

Next day, when the adjourned meeting was held, members present [principally those in attendance at the Branch Representatives' meeting (see p. 563)] gave him the permission he then sought, on the Council's behalf, to withdraw both motions so that they might be brought before a special meeting of members at a time and place still to be announced.

The chaotic conditions had arisen entirely during discussion on the first of the two motions, leaving the president little choice but to apply the closure. At that stage there had been no discussion on the second motion: the one concerning proposed collaboration with the National Pharmaceutical Union and other bodies in working out a scheme for the training of assistants to pharmacists.

The annual meeting began, in accordance with previous practice, on May 19 at 10 a.m., when scrutineers were appointed, to be adjourned until 8 p.m. for the declaration of results in the election of seven Council members. At the evening meeting THE PRESIDENT warned members that the room had to be vacated by 10.30 p.m., limiting the time that could be devoted to the various items of business.

Charter Medal Presentations

Before giving his report he presented the Society's Charter medals, the gold medal to Mr. Donald William Hudson and the silver to Mr. Eric Ashby Belford Knott. Mr. Maplethorpe said that Mr. Hudson's encyclopaedic knowledge of pharmacy and practical *expertise* had been placed unreservedly at the service of the public, the medical and nursing professions, and his own colleagues. Mr. Hudson's activities had extended to the provision of services in chemical and bacteriological analysis and to the supply and servicing of medical and surgical appliances and equipment, in which his ability as an accomplished worker in metal and wood had given him a rare facility. Mr. Hudson had first become prominent in pharmaceutical public life through his chairmanship of the Brighton 1942 Committee, a body engaged in different aspects of pharmaceutical work, which considered and reported upon the pharmaceutical implications of the Beveridge report [basis of the Welfare State]. He had served as a member of the Executive Committee of the National Pharmaceutical Union and Central N.H.S. (Chemist Contractors) Committee, 1947-56, and had been chairman of the N.P.U. in 1952. He was a member of Council

of the Pharmaceutical Society, 1949-61, and its president in 1957 and 1958.

MR. HUDSON said in reply that he was deeply grateful for the honour conferred on him. Anyone being presented with such a beautiful medal must be a proud man, not because it placed him in any special position, but because it demonstrated that the work which he had done had not been forgotten. On the Council he had been closely associated with the General Practice Committee, and one of the resolutions before the meeting that night was a direct outcome of the Committee's report. He pleaded with members to pass it.

In presenting the silver medal to Mr. Knott, THE PRESIDENT said that Mr. Knott's renown as a teacher was clearly shown in 1964, when a presentation had been made to him by his former and present students (see *C. & D.*, September 26, 1964, p. 319). Always active in local affairs of the Society, he had become secretary of the Edinburgh and South-eastern Scottish Branch in 1949, and had continued in office until quite recently. Mr. Knott's efforts in promoting the interests of his Branch had been unflinching, and the Society had been fortunate that he had been prepared to work so long and so energetically on its behalf.

Thanking the president, MR. KNOTT said his life had been spent as a teacher of pharmacy—"not a lecturer, not a reader, not a professor but a teacher." It had been a wonderful experience because it had brought him in touch with many great pharmacists. Except for the period between the two world wars, he had enjoyed every minute of it and would not have changed it for any other career. To the younger folk he said life consisted "not so much of what you get out of it but of what you put into it."

Annual Report

Presenting the Council's annual report, MR. MAPLETHORPE said that, during the past year, there had been no falling-off of problems or slackening of effort in dealing with them. The figures shown by the registers of pharmaceutical chemists and of premises continued to follow the pattern of recent years. In view of the man-power report, those figures now had more significance than in the past although, until the future man-power needs had been studied, it was not possible to draw firm conclusions from them. The time was in sight when all schools of pharmacy would be offering only courses for degrees. That would follow from the conversion of colleges of advanced technology into universities and of regional colleges of technology into institutions conducting courses for degrees to be awarded by the Council for National Academic Awards. It was against that background that the Council's decision to discontinue pre-graduate practical training had to be viewed.

Expansion of the Society's scientific activities had continued, and new prob-

lems were being studied that should yield results in improved service to the membership. He had been disappointed that the branches had turned down the proposals for a new constitution of the Council, and added "I feel sure that, as time goes on, the force of the arguments for those changes will become better appreciated, and I much hope that the matter will not be left where it now is."

Speaking on the proposed change in arrangements for counting votes from 1966 (see *C. & D.*, May 15, p. 493), the president said that the change would enable the programme of the annual meeting to be recast, and the evening adjourned meeting to be avoided. He knew the change would be regretted by some, particularly the scrutineers, who had welcomed the opportunity to serve the Society. But both the finding of scrutineers and the accommodation arrangements presented increasing problems, and the time had come when a new system needed to be adopted that would enable the annual meeting to be arranged without regard to the voting arrangements. Another change in the Society's organisation should create greater interest in its affairs, namely the establishment of the first of several membership groups. No better choice, he said, could have been made than agricultural and veterinary pharmacy for that purpose, and he was sure members would wish the group success in developing that important side of practice.

Times for Meetings

Before the report was moved and formally seconded by MR. J. C. BLOOMFIELD (vice-president) a number of members sought clarification as to the time at which the annual meetings would be held in the future. MR. E. J. WHITE, Westerham, Kent, hoped that no such time as 12 noon would be arranged, since most members would be unable to attend at that time. THE PRESIDENT said that he obviously could not forecast the time, but the Council would bear in mind the feeling of that night's meeting.

MR. A. G. REED, Leeds, queried a paragraph in the report that referred to a legal case (the Society v. Sangers, Ltd.). He claimed that the Leeds Branch had put forward a resolution urging the Society to seek amended legislation that would avoid similar judgments in the future. At the Council's request the motion had been withdrawn on the understanding that the matter was being dealt with speedily: had anything been done about it? MR. F. W. ADAMS (secretary and registrar) replied that the Council had asked for appropriate changes in the law, and he did not think it would be long before the result of the application was known. The report was adopted.

MR. H. STEINMAN (treasurer), moving the adoption of the financial statement for 1964, said he did not propose to comment on the accounts since they



MEMBERS OF THE PHARMACEUTICAL SOCIETY ARRIVE FOR THEIR ANNUAL MEETING

had been dealt with in the annual report. Instead he would say something about the problem that faced the Council in finding a headquarters building. A number of possible sites had been examined and rejected for one reason or another, but eventually there had been found, just to the south of Lambeth Bridge (opposite the palace) a site that appeared to satisfy the Society's requirements. Negotiations had been opened for the purchase of the various freehold and leasehold interests, but outline planning application had not been approved by the London County Council. The Society was appealing to the Minister of Housing against that decision. The Government's ban on office building within a radius of 40 miles of London made an office development permit essential, and an application for it was being submitted. The value of the Bloomsbury properties, together with other investments of the Premises Fund, should, said Mr. Steinman, be sufficient to buy a site in central London and pay for the erection of a building on it. To anyone who suggested that it would be advantageous to move out of London he gave a reminder that the location of the Society's headquarters must have first-class communications with other parts of the country. Not a day passed but a meeting of some kind or other was held in the Society's house. It was necessary to be in close proximity to other organisations, such as the Ministry of Health, the Poisons Board, the National

Pharmaceutical Union and others. Moreover, the Society's library and historical museum, he thought, was seen to greater advantage in London than it would be elsewhere.

There being no questions on the report, it was moved, seconded and passed.

Limits of Practice

THE PRESIDENT then moved the first of the two motions on the agenda: the motion defining the limits within which a pharmacy should be practised (see C. & D., April 17, p. 394). He said that those who had kept themselves up to date would not be surprised at the Council's action, particularly in view of developments in the circumstances of pharmaceutical practice since the report on the General Practice of Pharmacy had been published nearly four years earlier. Even apart from that the need to ensure that the practice of pharmacy retained its identity must long have been apparent. He thought it safe to say that pharmacists had always aspired to be able to practise their profession without recourse to other activities. A frequent theme of speeches before the National Health Service came in was that, when pharmacists obtained all the dispensing of the country, sidelines would be given up. That day had virtually arrived in 1948, but "we have seen no signs of that transformation." Clearly matters would not right themselves, and mere aspiration was not enough. It could even be positively harmful in nourishing illu-

sions. Some confusion as to what constituted the practice of pharmacy had been cleared up in the report, which had laid the basis for progress towards the goal. The Council's view, when it had considered the report, was that time should be allowed for its proposals on the matter to become familiar to pharmacists and to guide them in their thinking about the future. It might well be that developments in the interval had tipped the scales in some doubting minds and ensured a measure of support that would not have been obtained earlier. The spread of effort and interest over a progressively wider field of activities threatened the status of pharmacy. The circumstances in which pharmacy was becoming increasingly a peg on which to hang other activities, or was an offshoot of other activities, could, if they went on unchecked, lead to the practice of pharmacy being a caricature of the real thing. He asked the members to support the Council, which was satisfied that the recommendation was an "essential factor in preserving pharmacy as a profession and providing a comprehensive and efficient pharmaceutical service for the public." It was the business and not the premises, he said, that would determine whether a pharmacy was "new."

An Amendment Ruled Out

When the motion was opened for discussion, MR. W. A. BEANLAND, Folkestone, Kent, sought to introduce an amendment to limit the ownership of

pharmacies to pharmacists or pharmaceutically controlled boards, but THE PRESIDENT ruled the amendment not acceptable. MR. R. W. GILLHAM, Leeds, said that the history of science was strewn with dead and dying theories. The hypothesis that was being considered was that "diversification of goods is bad for pharmacy." But what did diversification entail? Certainly the pharmacist was not becoming less well educated. He was performing his dispensing services correctly, and as to premises there was a resurgence of re-fitting. There was thus no evidence that pharmacy was deteriorating. The multiple companies might be called the priests (or fiends) of diversification, but the public were not confused about where to take their prescriptions, since 38 per cent. were dispensed by such large concerns. The multiples trained 30-40 per cent. of post-graduate students, and since 1948 had spent £milions on refitting their pharmacies, which were the "brightest spot on the horizon" of some High Streets. Were they thinking only of business? Surely not, because they contributed to research, and their staff members served on committees in many organisations. If any pharmacist wished to develop an "ethical" pharmacy he was at liberty to do so, but the speaker objected to everybody being "cut down to their size." "We want unity, but not unity that destroys individuality." If the pharmacist was able to provide a good pharmaceutical service, was the Council to say "Thou shalt not" to other activities? Such an agreement as was proposed would be illegal under the Restrictive Trade Practices Act. The National Pharmaceutical Union Executive was supporting the motion—but only after making sure that existing pharmacies could continue with their subpost offices, wine licences, etc. Only the young man coming along would be confined by the motion.

"Three-line Whip"

MR. R. H. JACKSON, West Metropolitan, described as "rubbish" Mr. Gillham's claim that multiples made a contribution to pharmacy. Of the members present at the meeting he said "Boots and Timothy Whites seem to have a three-line whip out." They were dividing pharmacy into those who were in it because it was a profession and those who were in it for the maximum amount of money. The only interest of the multiples in the motion was that it would limit their operations. Pharmacists working for the multiples should remember that the multiples owed everything to them. Those members would not be employed but for their pharmaceutical qualification, and that was being jeopardised that night.

Another speaker suggested that the "meat" of the motion was its restriction of the type and quantity of goods that might be sold. It would thus be registrable under the Restrictive Trade Practices Act. (Cries of "Nonsense.") If it were necessary to defend the motion before the Restrictive Trade Practices Court the Society would receive adverse publicity.

MRS. MURIEL CALLOW, Bournemouth, said that pharmacy must pay the price

of being a profession and must accept the control by the Council of any "indifferent and bad" members.

"The meeting shows who is fearing this motion," declared MR. A. KING, Finchley, who described as "shameful" the practice of pharmacists selling buckets. MR. G. M. FOX, Chalfont St. Peter, Bucks, said that all members had entered pharmacy for the purpose of earning a living, and the motion would result in the Council telling them how to run their businesses. If the idea of "pharmacy only" was extended, was there any guarantee that the Government would make up salaries to a professional level? Those present should remember that they would be voting on behalf of the rest of the membership. To present a motion at the annual meeting was "archaic" and it should therefore be referred back to Council on principle.

"Jenkin" Again

ANOTHER MEMBER said that the motion was on a parallel with the Jenkin judgment. If another such case were taken to a similar conclusion the Society would lose dignity and its considerable powers of persuasion. The Society had no right to refuse registration of premises, but must first register the premises and could only then refer the case to the Statutory Committee.

MRS. S. TURNER, Folkestone, asked if members were content to be shopkeepers. Pharmacy was lagging behind other professions and she suggested an amendment should be added to the motion to require existing pharmacists to concur within ten years.

THE PRESIDENT said he could not accept such an amendment. MR. J. H. V. LAWRENCE, Virginia Water, Surrey, said that pharmacists had the highest standard of living they had ever known, but they were now meeting their keenest competition through the ending of resale price maintenance, etc. Yet it was now that the Society decided to hamper them by restricting what they sold. The restrictive differences between established and new pharmacies would bring bitterness and would act against the younger pharmacist.

MR. P. G. FLOOD, South-east Metropolitan, described such arguments as "arrant nonsense." There was now an opportunity to catch up with the optical and dental professions. Pharmacy was behind by twenty-five years, and it was through members' own fault. In ten years' time the graduate would not descend to selling just anything; he would leave the profession if not allowed to practise the profession he was trained for. "If you reject the motion you are confessing you have no business being members of a profession."

MR. F. W. ADAMS (secretary and registrar), called upon by the president to explain the working of the Restrictive Trade Practices Act, said that it was by no means the first time members had thought that a policy of the Council might infringe the Act. The question had been examined by counsel and the action pronounced proper and legal. The Act did not apply to the Society's proposal, and there was no need to register the agreement. He was satisfied

the Council could make the agreement and that the Statutory Committee had power to implement it.

MR. B. SILVERMAN, Kenton, Greater London, said the motion was an endeavour by the Council to raise the level of the profession in the eyes of the public, but pharmacy was a mixture of profession and trade. The rewards of professionalism were not alone sufficient to give an appropriate salary. The respect of doctors was for the pharmacist rather than for the goods he sold. THE PRESIDENT said it appeared that some speakers thought heavy restrictions were to be imposed on the goods that might be sold, and he reminded the meeting of the list of goods contained in the report on the General Practice of Pharmacy. There was no suggestion of restriction beyond those limits, and that report had been accepted by a general meeting.

MR. H. RIDEHALGH, Bournemouth, said that the possibility was on the horizon that medicines would be supplied only through pharmacies. If the motion were rejected that hope would be set back. MR. A. J. SMITH, Maidstone, said he was one of a group of six pharmacists who found they could make an adequate living from the goods mentioned in the report. They had five pharmacies between them and were able to work a five-day week. It was difficult for a young pharmacist to start in business today, but if, in the future, he had to compete with supermarkets, things were going to be even harder. Adoption of the motion would thus make conditions better for the younger pharmacist, though there was a need for redistribution of pharmacies and some pharmacies might have to close.

MR. R. H. GRIFFITHS, Wolverhampton, said the motion was contrary to the interests of the public and pharmacists. It represented dictatorship and would delegate to the Council powers to which they were not entitled. MR. G. J. HENDRA, Truro, said that if the motion were rejected members would find that things would progress to a stage at which it was too late to do anything. He deprecated the action of certain earlier speakers, who had treated the discussion of the motion with levity.

The meeting voted at that stage that the motion "should now be put." A show of hands indicated that the voting would be close and tellers were accordingly appointed. They found it impossible, however, to count the votes because of the crowding at the back of the hall and the fact that some members had not been able to get into the hall. THE PRESIDENT offered to withdraw the motion because of the confusion (*cries of "No"*). Finally, after heated discussion between platform and floor, he adjourned the meeting to a larger hall, at a date to be announced, so that more people could be present. The meeting ended when MR. J. C. BLOOMFIELD (vice-president) congratulated Mr. Mapletorpe on his handling of the situation.

Withdrawn for Reissue

The second adjourned annual meeting took place at 4 p.m. on May 20 immediately following the Branch Representatives' meeting. THE PRESIDENT

For mumps when the question is...

HOW TO ENSURE that a person who has difficulty in swallowing takes sufficient essential fluid and calories. As often as not it is you who are called upon to provide the answer.

Because a patient with mumps is feverish and finds it painful to swallow solids, he cannot take ordinary meals or anything strongly flavoured. Yet some intake of fluid and protein-sparing nourishment is essential.

What, then, can you do to help these patients? A liquid glucose drink will very often provide the answer, and just such a drink has been in everyday clinical use for many years... Lucozade. So, when the question is, "What shall I recommend to help this patient?" remember that Lucozade's value has been fully established over a long period of time.

Just why it is so suitable under these circumstances derives from its formulation:—

❏ Lucozade is basically a solution of liquid glucose which contains a number of carbohydrates, of which dextrose (glucose) is only one. The others (maltose, oligosaccharides and higher saccharides) comprise more than 80% of the total weight of the constituents. It is erroneous, therefore, to think of liquid glucose as being dextrose in liquid form. For instance, it is not as sweet as dextrose (or sucrose). The relative sweetnesses are: liquid glucose 23, dextrose 74, (sucrose 100).

❏ In man liquid glucose has been shown¹ to produce a 10% blood sugar rise in 5.1 minutes, compared with 7.2 minutes for dextrose and 8.3 minutes for sucrose. It spares protein and provides fluid. One large bottle of Lucozade supplies 546 Calories (except in Northern Ire-

land where, because of an increased liquid glucose content, it provides 650 Calories).

❏ Liquid glucose has a much lower osmotic pressure than either dextrose or sucrose and it is for this reason, together with its lower sweetness level, that it rarely causes nausea or stomach upset, even when taken in considerable quantity. Moreover, Lucozade is pleasant to take. It has a mild citrus flavour, is lightly carbonated and acidified with lactic acid.

❏ Lucozade is, therefore, invaluable—when fluid intake has to be increased; when a patient cannot face a normal diet or has difficulty in swallowing; in any gastro-intestinal disorder; pre- and post-operatively; in hepatitis; and in cases of fatigue due to a temporary drop in the blood sugar level.

¹ Lancet, 1959, i, 485.

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DENT, explained that, because of the confusion that had existed at the meeting on the previous evening, and the impossibility of taking a proper count, it had been necessary to adjourn that meeting. Under the constitution the adjourned meeting must be held within four days. Since all the membership must have an opportunity to discuss the important business, he asked permission (which was approved) to withdraw the motions, and promised that a special meeting would be called to discuss the motions again. Adequate

notice would be given of the meeting, and a large enough room hired for the occasion. One member pointed out that there was not one large enough to hold all membership. "How about Wembley?" queried another member (*laughter*). One speaker suggested that a Sunday would be more convenient for those members who had difficulty in obtaining locums, and another member reminded the president of the approaching holiday season. MR. MAPLETHORPE said the points would be borne in mind.

cillin trihydrate, cyclophosphamide, digoxin, and poldine tablets. The amendments are to take effect on June 1.

IN PARLIAMENT

BOTH MRS. JOYCE BUTLER and MR. A. DODDS-PARKER asked the Minister of Agriculture, Fisheries and Food questions concerning the large-scale use of artificial sweeteners "such as cyclamates" in foods and drinks. MR. FREDERICK PEART (Minister of Agriculture, Fisheries and Food) on May 19 told them that he had referred additional evidence to the Food Additives and Contaminants Committee. It had been given preliminary consideration by a pharmacology subcommittee that had advised that it did not consider the new evidence justified a reversal of the previous advice—that the use of cyclamates in soft drinks, up to the maximum permitted by Regulations did not constitute a hazard to health. The Committee, however, wished to review all the evidence on the use of cyclamates and no regulations permitting a more general use of cyclamates in food would be made until the Committee's final report had been received.

Food Labelling

MR. HOY informed MRS. BUTLER on May 19 that the Ministry of Agriculture, Fisheries and Food was studying a number of representations made on the report of the Food Standards Committee on Food Labelling. Proposals for new labelling regulations would be prepared so quickly as possible.

Littlewood Committee's Report

Replying to a number of questioners on May 20, SIR FRANK SOSKICE (Home Secretary) said he was considering the report of the Littlewood Committee on vivisection but he was not yet in a position to make a statement.

Drug-peddling

The Home Secretary was asked a number of questions on May 20 concerning drug-peddling and drug taking particularly among teenagers, and in a written reply he stated that he had noted with concern suggestions that such drug taking was increasing. He was watching the position closely. He added, "The Interdepartmental Committee on Drug Addiction was reconvened last year to study certain aspects of the problem and its report is expected soon. I am satisfied that those concerned in manufacturing and handling dangerous drugs take strict security precautions in accordance with the conditions of their licences and regulations. The Drugs (Prevention of Misuse) Act, 1964, makes no provision as regards the custody of the drugs controlled thereunder. The possible need for further controls is being kept under review."

Diabetic Foodstuffs

MR. A. LEWIS asked the Secretary of State for Economic Affairs if he was aware of the excessive charges being made for diabetic foodstuffs and whether he would refer such items to the National Board of Prices and In-

PHARMACOPŒIAL CHANGES

Tablets and capsule excipients

A REQUIREMENT that tablet excipients must be such that they do not interfere with official assay procedures is to be included in the British Pharmacopœia states the Pharmacopœia Commission in a report to the Pharmacopœia Committee of the General Medical Council. The Commission refers to the general monograph on tablets that is included in the Pharmacopœia, which states that substances added to the medicament in a tablet, such as diluents, disintegrating agents, moistening agents and lubricants, must be innocuous and without influence on the therapeutic efficacy of the active ingredient. When monographs are prepared the tablets available at that time are tested in the laboratory in order to ensure that the method of assay is suitable, but experience has shown that samples may appear later that, due to the presence of different added substances, cannot be assayed by the official method. It is considered essential to maintain the official assay procedures as the final arbiter of the acceptability of the tablets for pharmacopœial purposes, and some restriction must be placed on the nature of the added substances. It is proposed to impose a similar limitation on the substances that may be added in the preparation of capsules. The Commission points out that it is willing to consider modifications of the official assays when cases of difficulty are brought to its attention.

Identification of Medicines

The Commission has also discussed the question of the rapid identification of dispensed medicines, particularly from the aspect of safety in medication. The colouring or marking of tablets, including those of the Pharmacopœia, has been advocated by some for that purpose but any scheme on such lines is considered to have serious disadvantages and limitations. The Commission state that to be effective it would need to be comprehensive and mandatory, it would take a considerable time to elaborate and put into use, there would be the need to distribute widely the key to any code and keep it up to date, and there would be the danger of misuse by prescribers. Any such scheme would not be applicable to the many other forms of medicines. The Commission considers that in order to achieve the objective of the rapid identification of all medicines, urgent attention should

be given to the descriptive labelling of dispensed medicines. The report continues: "Statements on the identification of dispensed medicines, particularly tablets, have frequently referred to the need for rapid identification in cases of poisoning or over-dosage but the most important aspect of the case for this knowledge arises from the need for the doctor to know the nature of the medication that a patient is receiving. Lack of information on a patient's treatment may confuse diagnosis and render further treatment hazardous. Changes in the habits of doctors are increasing this hazard. With the extension of the "five-day week" and of group practice, patients are frequently attended in their homes by doctors doing night or week-end duty and not familiar with the treatment being given or in a position to consult the records. Similar conditions also apply when patients attend hospital and, if anaesthesia is called for, knowledge of the patient's medical history is of the utmost importance. It is the opinion of the Commission that these circumstances provide urgent and compelling reasons why immediate steps should be taken to facilitate the introduction of a method of identification of dispensed medicines. It is the view of the Commission that every endeavour should be made to secure early acceptance, both from the medical and pharmaceutical sides, that it should become normal practice for the name of the preparation to be stated on the label on the container when a medicine is dispensed in compliance with a prescription unless the prescriber specifically directs otherwise."

Another item in the report is that the Joint Committee on British Chemical Reference Substances has approved arrangements for the release of vials of digoxin and 2-t-Butyl-4-methoxyphenol as reference substances. The former is necessary in the examination of samples of digoxin, digoxin injection and digoxin tablets to determine whether they comply with the requirements of the Addendum 1964; the latter is similarly required in connection with butylated hydroxyanisole.

On the recommendation of the British Pharmacopœia Commission the Pharmacopœia Committee have authorised the publication of certain amendments to the monographs in the Addendum 1964 to the British Pharmacopœia 1963 relating to ampicillin, ampi-

comes. MR. AUSTEN H. ALBU (Minister of State, Economic Affairs) in a written answer stated that the Secretary of State understood there had been no general increase in prices recently and on the information which was available he saw no justification for a reference to the National Board for Prices and Incomes.

Birmingham Prescriptions

MR. IVAN I. EVANS asked the Minister of Health what evidence he had received of an increase or decrease in demand in the Birmingham area for prescriptions, following the abolition of prescription charges on February 1. MR. KENNETH ROBINSON (Minister of Health) in a written answer on May 24 said that 182,000 more prescriptions were dispensed by chemists in the Birmingham area during February and March than in the corresponding months of 1964.

Phenacetin

MR. FISHER asked the Home Secretary if he would introduce legislation to make compulsory the labelling of medicine containing phenacetin in order to warn patients of the danger of overdoses. Sir F. Soskice in a reply on May 19 said that substances which were controlled as poisons could be made subject to labelling requirements of that kind, but have not felt justified, on present information, in referring the substance to the Poisons Board. Before considering the matter further he was awaiting the outcome of discussions with the Association of the British Pharmaceutical Industry and the Proprietary Association of Great Britain about the possibility of introducing a voluntary labelling scheme.

Toxic Chemicals in Agriculture

When MR. J. A. FARR asked the Minister of Agriculture, Fisheries and Food if he would announce his decision on the future control of poisonous chemicals used in agriculture and horticulture, MR. JAMES H. HOY (Joint Parliamentary Secretary, Ministry of Agriculture, Fisheries and Food) in a written answer on May 19 indicated in the negative and said that the Advisory Committee on Pesticides and Other Toxic Chemicals had not yet completed its review of the present arrangements for the safe use of pesticides in agriculture and food storage.

COMPANY NEWS

Previous year's figures in parentheses

HICKSON & WELCH (HOLDINGS), LTD.—An unchanged interim dividend of 5 per cent. is declared.

HONEYWILL & STEIN, LTD.—MR. R. E. Hopkins has been elected to the board. He joined the company in 1938, was appointed sales manager in 1956 and general sales manager in 1961.

GREEFF-CHEMICALS HOLDINGS, LTD.—Profits in 1964 were again a record, improving from 1963's £198,000 to £217,000, after tax of £164,000 (£154,000). The final dividend is being raised from the equivalent of 6.4 per cent. to 8½ per cent., making a total of 10½ per cent. (equivalent of 9.6 per cent.).

Pfizer International.—MR. R. C. Fenton has been elected chairman of the board in succession to Mr. J. J. Powers, jun., who earlier this month (see *C. & D.*, May 22, p. 522), was elected president and chief executive officer of the American parent company, Chas. Pfizer & Co., Inc. Mr. Fenton continues as president of Pfizer International.

BEECHAM GROUP, LTD.—Subject to audit, group sales for the year ended March 31 were £66,995,000 (£61,091,000). Profit before taxation was £12,021,000 (£9,289,000); taxes £6,985,000 (£4,743,000). Profit attributable to parent group was £5,239,000 (£4,623,000). The directors recommend a final dividend of 11 per cent. which, together with the interim dividend makes a total for the year of 20 per cent. (18 per cent.).

PERSONALITIES

PROFESSOR FINN SANDBERG, who delivered the 1965 University of London special lectures in pharmacy (*C. & D.*, May 22, p. 534), is in charge of pharmacology and pharmacognosy departments at the Royal School of Pharmacy, Stockholm. He speaks seven languages and is a U.N.E.S.C.O. representative in Asia. During his travels he has collected samples of arrow poisons used by primitive tribes all over the world.

MR. W. ROGER BUCKETT, Currie, Midlothian, was recently awarded the degree of Doctor of Philosophy in the faculty of medicine, University of London, for a thesis on "Pharmacology of 14-Cinnamoyloxycodeinone, a Potent Analgesic." Dr. Buckett completed his practical work while with Edinburgh Pharmaceutical Industries, Ltd., and was recently appointed head of pharmacology in the new research centre of Organon Laboratories, Ltd., Newhouse, Lanarks.

MR. A. W. CLARK, who has been elected president of the Society of Glass Technology (see p. 543), is chairman and managing director, Beatson, Clark & Co., Ltd. He is also president of the Yorkshire Glass Manufacturers' Association, chairman of the National Joint Industrial Council for the glass container industry, president of the Association of Glass Container Manufacturers and immediate past president of the Glass Manufacturers' Federation and of the British Glass Industry Research Association. Mr. Clark was awarded the O.B.E. in 1963.

WILLS

MR. J. P. H. GREENWOOD, 23 Barrett Road, Birkdale, Southport, Lanes, who qualified as a chemist and druggist in 1913, left £2,912 (£2,850 net).

MR. J. H. HADFIELD, M.P.S., 540 Huddersfield Road, Stalybridge, Cheshire, left £12,044 (£11,950 net).

MR. H. F. HANDS, M.P.S., 199 Prestbury Road, Cheltenham, Glos, left £49,527 (£49,391 net).

MR. G. D. HERD, M.P.S., Laurel Cottage, King Street Lane, Winnersh, Wokingham, Berks, left £3,863 (£3,578 net).

MR. J. HUMBER, M.P.S., 75 Poulton Street, Kirkham, Lanes, left £21,402 (£21,311 net).

MR. H. R. JOHNS, M.P.S., 125 High Street, Banstead, Surrey, left £3,560 (£2,060 net).

DEATHS

COUTTS.—Recently, Mr. Robert B. Coutts, export manager for Moore Medicinal Products, Ltd., Aberdeen, for the past eighteen years, aged sixty-two.

GASS.—Suddenly, on May 12, Mr. John Robert Gass, M.P.S.N.I., The Square, Markethill, co. Armagh, Northern Ireland. Mr. Gass qualified in 1938.

GIBSON.—On April 24, Mr. William Eric Gibson, M.P.S., 7 Wyvern Close, Orpington, Kent. Mr. Gibson qualified in 1930.

GROOMBRIDGE.—On May 8, Mr. Edred Joshua Groombridge, M.P.S., 3 Severus Avenue, Acomb, Yorks. Mr. Groombridge qualified in 1906.

HEATON.—Suddenly on May 16, Mr. Clifford Heaton, Gerard Road, Wallasey, aged fifty-seven. Mr. Heaton, who qualified as a chemist and druggist in 1931, had returned to Wallasey after living in the south. On May 15 he had married Mrs. Phyllis Shaw, 44 Stoneby Drive, Wallasey, and after the reception had spent the night in Chester before travelling to Colwyn Bay, where he died.

ROBINSON.—On April 30, Mr. Dugdale Thornton Robinson, M.P.S., 21 Philbeach Gardens, Earl's Court, London, S.W.5. Mr. Robinson qualified in 1922.

SCOTT.—On May 14, Mr. Robert Scott, M.P.S.N.I., Byways, Viewfort Park, Dunmurry, co. Antrim. Mr. Scott qualified in 1927.

Mr. A. N. Morrison, M.P.S.N.I., writes: To a wide circle of friends the death of "Bob" Scott brings not only deep regret, but a deep sense of personal loss. This applies with even greater force to those, who like myself, had the privilege of working for and with him, in his pharmacy as an apprentice. To train five apprentices, including his own daughter and son, and to have a big influence in the careers of at least two other students of pharmacy and to see all of them qualify, two with Ph.D. degrees (including his own son), three with B.Sc. degrees in pharmaceuticals and the other two with Diplomas in Pharmacy is a record of which any retail pharmacist can indeed be proud. A man of great professional competence himself, he had the vision to advocate the highest possible standards of education for future pharmacists as long ago as the late 1930's. Although not widely known in pharmacy circles generally in N. Ireland, nevertheless, pharmacy owes him a great debt of gratitude for a lifetime of devotion to his work, for the personal example he set of retail pharmacy at its best, but most of all for his selfless devotion, tolerance, and skill in passing on to his apprentices, not only his knowledge and skill, but also his great love and ambitions for pharmacy as a profession. His death leaves us poorer men and women, but in us his work lives on and in our hearts we shall ever cherish the memory, not only of a teacher to whom we owe much, but of a true pharmacist and a much loved personal friend.

NEW PRODUCTS AND PACKS

PHARMACEUTICAL SPECIALITIES

Through Doctors.—Ortho Pharmaceutical, Ltd., Saunderton, High Wycombe, Bucks, are marketing under the name Gynekoil the Margulies spiral intra-uterine contraceptive device. It is available to the medical profession only, and is not being generally distributed through the trade, but may be obtained from the surgical department of certain wholesale chemists or direct from the company.

FOODS

Instant Foods in New Flavours.—Three new flavours in Robinson's instant foods are being introduced by W. & J. Colman, Ltd., Carrow Works, Norwich, Norfolk. Messrs. Colman have also added new flavours to the range of Robinson's baby foods. The first course dishes now include vegetables and lamb and cauliflower cheese variety, and the second course is increased by the addition of rice and prunes.

Canned Fruits for Diabetics.—Fruit salad, apricots, peaches, pears and pineapple are included in a range of Wander diabetic canned fruits prepared in consultation with the British Dia-



betic Association by A. Wander, Ltd., 42 Upper Grosvenor Street, London, W.1. They contain sorbitol as the sole sweetening agent. Each variety is packed 1 doz. 8-oz. tins to an outer. Colour of lettering on outer denotes variety for easier stock control.

Re-introduced.—Three blackcurrant varieties are being re-introduced into their range of baby foods by Trufood, Ltd., 113 Newington Causeway, London, S.E.1, following arrangements to ensure continuity of supply of the right quality of fruit. Banana and blackcurrant pudding with vitamin C is now back in the Spoonfoods range and in the junior foods apples in blackcurrant sauce with vitamin C and bananas, blackcurrants and cereal with vitamin C.

VETERINARY SPECIALITIES

Salmonellosis Vaccine.—Mallavax is the brand name of a new salmonellosis vaccine for calves developed by Dr. H. Williams Smith of the Animal Health Trust and introduced by Burroughs Wellcome & Co., 183 Euston Road, London, N.W.1. Mellavax is claimed to be effective against *S. dublin* infections. A live vaccine, the supply of the product is available to veterinary surgeons or to pharmacists supplying on prescription. Issued in 5 and 25 dose packs.

COSMETICS AND TOILETRIES

Talc with Deodorant.—A new talcum powder, Fascination, has been introduced by Cussons Sons & Co.,



Ltd., Kersal Vale, Manchester. Containing Deolidx deodorant, it is issued in a container of 99 gm. in outer of 1 doz.

Spray Deodorant.—To complete their deodorant range, Goya, Ltd., 161 New Bond Street, London, W.1, are launching in June a new puffer spray deodorant containing hexachlorophene and aluminium chlorhydrate. It is available in all the Goya fragrances in unbreakable plastic bottle.

Toilet Perfume in Atomiser.—Parfums Marcel Rochas (England), Ltd., 19 Grosvenor Street, London, W.1, have made an addition to their atomiser range in Great Britain as part of a special promotion designed to introduce their *parfum de toilette* to a wider public. The 2-oz. atomiser has the distinctive lace-patterned glass bottle of the series and gold cap, and is filled with *Femme parfum de toilette* (described as "the ideal medium between perfume and Cologne — less concentrated than perfume but stronger than Cologne").



NEW SMALL TUBE: As companion to the Endocil day-care bottle, Organon Laboratories, Ltd., Crown House, Morden, Surrey, have produced the lightweight tube illustrated.

Perfume-free Hair Sprays.—New Nestle sprays available through the distributors, Fassett & Johnson, Ltd., 86 Clerkenwell Road, London, E.C.1, have been formulated to meet a demand for a hair spray without perfume so as not to conflict with any other perfume or cosmetic the user is wearing. Nestle "natural net" is water-soluble, making the hair easy to reset with a comb. It is claimed not to dull the hair and to leave no stickiness. The pressurised container holds 16 oz. of the spray.

A New Launch Under an Established Name.—The Beecham Toiletry Division is launching a brand new range of toiletries under the Amami trade mark. It will consist of Amami styling lotion, with new formula, perfume, and in a new plastic applicator pack; Amami liquid shampoo in sachets and bottles, aerosol hair spray, a "firm hold" ver-



sion in lilac, white and gold, and "normal hold" in marine blue and white; and Amami spray deodorant in a blue and white squeeze pack and an aerosol can. The new-formula styling lotion is being launched nationally, the shampoo and hair spray test-marketed in the Midlands, North and West England and Wales, and the deodorant in the West of England and Wales only.

OVER-THE-COUNTER MEDICINALS

Redesigned.—Reckitt & Sons, Ltd., Hull, are introducing a new pack of their product Dettolin. It has been given a striking new blue, gold and white label high-lighting Dettolin's two main areas of use—as an antiseptic gargle and as a mouth wash. Current press advertising features its safety and the antiseptic qualities.



TRADE NOTES

Sole Distributors.—Henri L. Jaccaz & Co., 32 Shaftesbury Avenue, London, W.1, are the sole distributors in Britain for the Kitién French-made lipsticks.

Nursery Accessories.—The Kaymet Co., Kaymet Works, Sylvan Grove, London, S.E.15, invite chemists to apply for details of their range of over 400 nursery accessories.

Discontinued.—The manufacturers of Belze tablets, H. Bellringer, Ltd., 1 Elton Street, Manchester, 7, announce that the product is being discontinued from May 15.

Wasp-Time Again.—John Bell, Hills & Lucas, Ltd., Oxford Works, Worsley Bridge Road, London, S.E.1, remind chemists that the time is appropriate to show their product Wopsey, "the enemy of wasps."

Holiday Pack.—A pack that includes S3 medicated cream shampoo (8-10 shampoos) and Sebosyn hair conditioning and setting cream is available during the holiday months at a saving of 1s. 6d. Manufacturers are Steiner Products, Ltd., Harvist Road, London, N.7.

Distribution Change.—Chemist Brokers (a division of Food Brokers, Ltd.), Crown House, Morden, Surrey, have been appointed by Kenced S.A., Geneva, United Kingdom distributors of Salvex adhesive plasters. Kenced, S.A., Geneva, founded early in 1964, is jointly owned by the Kendall Co., Boston, U.S.A., manufacturers of surgical dressings, and Cederroth Stockholm-Geneva.

Competitions

£2,600 for Displays.—Supporting a national Press and Southern Television advertising campaign for Sparklets soda syphons this summer, the British Oxygen Co., Ltd., Sparklets products, Great West Road, Brentford, Middlesex, are holding a window and point-of-sale display competition, with prizes amounting to £2,600. Competitors are asked to set up a window or shop display featuring Sparklets syphons, the theme being a long cool drink in a summer setting. There are two classes—professional and non-professional, and first prize in each is a £500 nineteen-day cruise for two in the "Empress of England," second prize a cruise for two for a fortnight, valued at £250, in the "Capetown Castle." Ten regional prizes valued at £100 each are being awarded irrespective of category, and there will be fifty consolation prizes of Sparklets syphons. Competitors are asked to photograph the display in black and white or colour and send the prints to the address as given above. The judges will be looking for the most imaginative window or shop display which in their opinion does most to sell Sparklets syphons and bulbs. The display must be on show for at least three weeks between May 1 and August 31.

Bonus Offers

RICHARD HUDNUT, LTD., Chestnut Avenue, Eastleigh, Hants, Style Set setting lotion, 10 per cent. display bonus on order for 1 doz. or more.

W. B. CARTWRIGHT, LTD., Rawdon, Leeds. Bunty powder, cream and baby feeder. Thirty-nine invoiced as thirty-six; or eighty-four invoiced as seventy-two, plus quantity discounts of 5 per cent. on £5 orders, excluding purchase tax; 7½ per cent. on £7 10s. orders excluding purchase tax and 10 per cent. on orders totalling £10 excluding purchase tax.

Premium Offers

ARMOUR CO., Chicago, U.S.A. (distributors): **FOOD BROKERS, LTD.,** Crown House, Morden, Surrey. Beach wrap for 32s. 6d. (worth 57s. 6d.) to purchasers of Dial soap. Until October 31.

CHEMIST BROKERS, Crown House, Morden, Surrey (distributors for Armour & Co.). Plastic weatherproof garden tub worth 22s. 4d. for 15s. 6d. plus any two Dial wrappers. Until September 30. In Midlands area, a punch-ball with rubber string and headband free to anyone sending in one wrapper of Dial soap. Until August 31.

J. & J. COLMAN, LTD., Carrow Works, Norwich, NOR 75A. Pyrex feeding bowl for 4s. 9d. (value 8s. 9d.) for customers who send the top from any Robinson's instant foods or cereal pack.

EUCRYL, LTD., babycraft division, Southampton. Gift of choice from range including baby's plate, spoon and pusher, mohair rug, wall clock, car seat, bathroom scales, alarm clock, etc., in return for gift token enclosed in packs of nappies, pants and cream.

JEVES-PARAZONE SALES, LTD., Nylon housecoat value £4 offered at 49s. 6d. plus two tokens from large size of Ibcot or Jeypine disinfectant, Sanilav toilet cleanser, Parozone bleach or Babysoft twin toilet rolls.

KIMBERLY-CLARK, LTD., Larkfield, Maidstone, Kent. A new consumer premium offer, based on Walt Disney's latest hit "Mary Poppins," has just been launched by Kimberly-Clark, Ltd., with their Kleenex tissues. Two mobiles, designed by Walt Disney Studios and printed in full colour depicting characters from the film "Mary Pop-

ping" for 7s. the pair, plus a tear-strip from tissue pack.

PHILIPS ELECTRICAL, LTD., Century House, Shaftesbury Avenue, London, W.C.2. With a Philips hand hair driers sold during the next few weeks, a free black-and-white toy woollamb.

PHILLIPS, SCOTT & TURNER CO., 2 St. Mark Hill, Surbiton, Surrey. Andrews liver salt. Box of six unbreakable, plastic, half-pint tumblers for 4s. 6d. (saving of 5s. 6d.).

ROBERTS WINDSOR, LTD., 14 West Smithfield, London, E.C.1. Choice of four flower print worth 11s. 6d. each in return for 3s. 6d., an evidence of purchase of any of the Roberts Windsor range of floral toiletries.

TONI CO., Hawley Lane, Farnborough, Hants.—Toni super, regular, gentle and "smooth" sleek." Tame cream rinse free with every whole head refill kit. While stocks last.

A. WANDER, LTD., 42 Upper Grosvenor Street, Grosvenor Square, London, W.1. Baby's car seat value £2 19s. 11d. for £1 18s. 11d., plus the baby illustration from the front of Ovaltine baby rusk or teething rusks pack.

Holiday Closings

WHITSUNTIDE holiday for most manufacturers in the trade is from closing time on Friday, June 4, until opening time on Tuesday, June 8.

The following special arrangements should be noted:—

THE BRITISH DRUG HOUSES, LTD., and **B.D.H. (LONDON WHOLESALE), LTD.,** Skeleton staff Saturday, June 5.

GLAXO LABORATORIES, LTD., Greenford and Dukinfield warehouses, Skeleton staff 9 a.m. to noon, Saturday, June 5. Bargedie warehouses will operate as usual.

PHARMACEUTICAL SPECIALITIES (MAY & BAKER), LTD., Dagenham, Essex. Closing noon Friday, June 4. Urgent supplies from John Bell & Croyden, 50 Wigmore Street, London, W.1 (telephone Welweck 5555).

PHARMAX, LTD., Thames Road, Crayford, Kent. Urgent supplies from John Bell & Croyden.

WILLIAM RANSOM & SON, LTD., Hitchin, Herts. Reopening Wednesday, June 9.

MANUFACTURERS' ACTIVITIES

Laboratory Apparatus Display.—The Baird & Tatlock group of companies are displaying their range of products at the Metropole hotel, King Street, Leeds, June 1-3.

Glass Maker's Plant Investment.—Rockware Glass, Ltd., have invested £250,000 in a fully automatic materials-handling and mixing installation at their Greenford, Middlesex, plant.

Sponsored Bowlers.—Energen Foods Co., Ltd., sponsor a ladies bowling team in the *Bournemouth Times* bowling league. The team has been named the Energettes.

Sailing Trophy.—Optrex, Ltd., Perivale, Middlesex, are awarding a pair of binoculars to the skipper and a cheque to the winning crew in the Optrex trophy race (*Daily Mirror* dinghy class) at the national open championship under the auspices of the Torbay Yachting Association at Torquay on September 6.

International Award.—The Breck department of Cyanamid of Great Britain, Ltd., Bush House, Aldwych, London, W.C.2, has won, for its success of its 1964 launch of Breck shampoos and hairs sprays in London, an award in a competition open to Cyanamid International subsidiaries throughout the world. Mr. Martyn Barker, who has been named Breck's top salesman in

Britain, is going to the United States to receive the award in person.

Trophy Races.—Ilford, Ltd., Ilford, Essex, is sponsoring a series of motor races at the Brands Hatch and Mallory Park circuits throughout 1965 to find the Ilford Saloon Car Motor Racing Champion of the Year. There will be races for the classes of car and the overall winner will receive a trophy and £100 cash; the winners of the other two classes £50 each. Other prizes will be awarded in the qualifying heats.

Award for Sponsored Film.—"Make No Mistake," a film sponsored by Johnson & Johnson (Great Britain), Ltd., has won the gold award in category A of the British Medical Association's annual medical film competition. Produced by Stanley Schofield Productions, Ltd., the film was made in co-operation with the Medical Defence Union and the Royal College of Nursing and National Council of Nurses of the United Kingdom. Category A comprises films commercially sponsored and produced by professional film units. "Make No Mistake" deals with safety routines in hospital, following a typical surgical patient from admission to discharge, with stress on the safety precautions that protect him from the possibility of human error.



The CHEMIST AND DRUGGIST

For Retailer, Wholesaler and Manufacturer

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Battle Joined

"REGULARS" at the annual meetings of the Pharmaceutical Society must have rubbed their eyes a little to find, on arrival on May 19, instead of the usual relatively free choice of seat, a solid phalanx of members already comfortably settled in, and not many familiar faces among them. Some may have been forgiven for supposing that intending spectators at the evening's international football match at Wembley had mistaken the venue. The effect was that many who usually sit were crowded into the standing room around the seats or even made to strain their ears to follow the proceedings from the foyer or staircase beyond the door.

As things turned out the proceedings were more in character with the scrums associated with the other brand of football—except, perhaps, in the matter of transport, for rumour had it that many came by facilitated passages on bus or coach. Throughout the evening, indeed, references were made to the presence of pressure groups. One member said it appeared that the two large multiples had a three-line whip in operation, and certainly "multiple" pharmacists were noted as having come from as far afield as Glasgow, Newcastle-on-Tyne, Nottingham and Wolverhampton, while London managers were reported to have received reminders by their seniors of the importance of the meeting.

Not until the meeting began discussing the first motion (which sought to define the limits within which a new pharmacy should be practised) did the reason for their presence become apparent. The pattern of the speeches brought the president, in whose name the motion stood, under heavy fire, with charges of Council "dictatorship" as the main ammunition. When it came to voting on the motion a clear majority for either side was not evident, and tellers were appointed. They found their task of counting impossible because of the confusion caused through the crowded conditions. So intolerable did conditions eventually become that the president finally took the only course left open and adjourned the meeting. In the meantime surprise, consternation and apprehension at the turn events had taken had become evident among those supporting the motion.

Companies may obviously be entitled to urge their staff to attend the annual meeting: one could even wish they would urge attendance at branch level also. Even if, as was rumoured, they paid travelling expenses or arranged transport facilities, they are, it must be accepted, within their rights.

What matters is that a vote taken in such circumstances shall not be regarded as representative of the Society's membership as a whole, as it might well have done if the "invasion" had been composed of people experienced in the procedure at annual meetings. Those other pharmacists who wish to see their professional status advanced, and are not prepared to put profits from sales of such things as "buckets and bird seed" (as one member put it) before their professional standards, have now to mobilise enough of those whose aims are similar to turn up at the special meeting that has been promised (see p. 547). The problem to be faced by members who seek to enhance pharmacy as a profession is clear—namely whether the standards are to be set by their own professional colleagues or to be subject to pressures ("dictatorship"?) by commercial interests outside the membership—in fact, they must operate their own "three-line whip."

Careers Within a Career

WHEN a sixth-form pupil chooses pharmacy as a profession he or she has by no means staked out a future career. Indeed, it would be almost impossible to do so at that stage, for he is entering a calling with many diverse applications. A final decision is unlikely to be taken until late in his academic training. Even the student with preconceived ideas about his future may well find that his outlook changes in the light of his progress in, and liking for, particular parts of the curriculum. One who starts intent on a commercial career may well develop a desire to carry out fundamental research, while the "pure scientist" may seek to use his acquired knowledge by offering advice direct to the public across a pharmacy counter.

Preferably the decision should be made over a period of time after due consideration of all the possibilities. But if every road is to be open to him the student must have in his mind some broad picture of each branch of the profession. He can then inquire further into those that hold the most appeal to himself.

To provide the student with such an outline of opportunities is the purpose of this "Careers and Educational" special issue of *C. & D.*, which contains articles dealing with the three main branches. So far as general practice is concerned it deals more particularly with the private sector, since it is likely that the ownership of a pharmacy (probably in partnership with others) remains a goal upon which many a young pharmacist sets his sights. Some who have that aim may fail to carry it through—deterred from making the necessary effort, perhaps by lack of finance or by a false start along the wrong road. We therefore hope we shall have succeeded in indicating the right way. The articles on the pharmaceutical industry and hospital pharmacy each survey the whole of their respective fields.

In "Opportunities in Pharmacy" we describe other openings for those with the pharmaceutical qualification and for each we have attempted to give an indication of the salaries that might be expected. We would, however, remind the student of one thing: Although he may start on a salary "scale," his further progress will depend upon ability, initiative and a willingness to work hard. Once he has accepted that a profession makes demands, in addition to providing an income, he should readily find that pharmacy offers many unexpected rewards and always a challenge.

NEW BOOKS

Drawings of British Plants

STELLA ROSS-CRAIG. *G. Bell & Sons, Ltd.*, York House, Portugal Street, London, W.C.2. 9½ × 6 in. Plates 32. 10s. 6d.

THE latest volume in the series of drawings by Miss Ross-Craig (part 21) is concerned with plants in the Natural Orders Boraginaceae, Convolvulaceae and Solanaceae. To the pharmacognosist the plates on belladonna, hyoscyamus and comfrey will have an especial interest.

Commercial Salesmanship

ALAN GILLAM. *United Commercial Travellers' Association*, 180 Tottenham Court Road, London, W.1 (personal application only) or by post from U.C.T.A. (Scottish Office) 28 St. Enoch Square, Glasgow, C.1. 8 × 5½ in. Pp. 128. 15s. (plus ninepence postage).

IN this first text-book to be published by the United Commercial Travellers' Association, the text is based on the salesmanship syllabus of the U.C.T.A. Diploma examination. Much of it contains advice that is simply sound commonsense yet it is surprising how many salesmen need to be reminded of some simple details from time to time. For the office manager who insists on regular daily, weekly or monthly reports that have no specific object in view, except to exercise some sort of a control, there is also advice. Such general requests make salesmen hostile to all report-writing says the author. The book will be useful for those salesmen who do not have the opportunity of undergoing thorough training before going on the road.

Piante Medicinali—Chimica, Farmacologia e Terapia

R. BENIGNI, C. CAPRA, and P. E. CATTORINI. *Inverni & Della Beffa, S.p.A.*, via Ripamonti 99, Milan, Italy. Distributors: *Messaggerie Italiane*, via Lomazzo 52, Milan. Volume II. 9¼ × 6¼ in. Pp. 1,100. Lire 12,000.

THOSE in possession of the first volume of this work will recall that it collated literature on the chemistry, pharmacological properties and therapeutic uses of those medicinal plants with Italian common names beginning with the letters from A to H. Volume II which is now available completes the alphabet with another 112 monographs. Each is treated fully with structural formulae and a comprehensive list of bibliographical references. Some idea of scope of the work can be gathered by the space devoted to the item on rauwolfia which occupies 140 pages plus twelve pages of literature references. Handsomely produced with text in Italian, the book is unquestionably unique among books on botanical drugs. The publishers advise that vol. I, published nearly three years ago (see *C. & D.*, September 1, 1962, p. 219), is available also (price lire 8,000).

An Introduction to Microbiology

An Introduction to Parasitology

W. B. HUGO (microbiology). J. M. WATSON (parasitology). *William Heinemann Medical Books, Ltd.*, 23 Bedford Square, London, W.C.1. 8½ × 5½ in. Pp. ix + 146 and pp. vii + 184 respectively. Each 20s.

THE two titles are the first in a new series of pharmaceutical monographs aimed at providing "an up-to-date series of short publications for teaching general and specialised topics to undergraduate students of pharmacy and allied subjects." General editor for the series is Professor J. B. Stenlake (professor of pharmacy, University of Strathclyde) who, in a preface, writes of the hope that each monograph will provide a permanent record for study purposes, capable of being used by students in lieu of lecture notes. The volume on microbiology gives an account of the construction, staining and reproduction of the bacterial cell, includes chapters on cultivation of bacteria and factors affecting their growth, and on bacterial metabolism. A final chapter examines in more detail the general properties of those micro-organisms, including viruses and fungi, that are of significance in pharmacy. In the volume on parasitology an attempt has been made to fill a gap in current pharmaceutical courses which, in the author's view, have not kept pace with recent interest in combating parasitic infection in humans and animals. The two main classes of parasite are considered under the headings of protozoology and helminthology, each species having its morphology, distribution and life-history summarised. Prevention and treatment of infection are briefly discussed.

About one-third of the book is devoted to a study of entomology in order to acquaint the student with the importance of the intermediate hosts and vectors of the parasite itself. The text is liberally illustrated with line drawings.

Drug Addiction in Youth

ERNEST HARMS, PH.D. (editor): *International Series of Monographs on Child Psychiatry*, Vol. 3. *Pergamon Press*, 4 Fitzroy Square, London, W.1. 63s. Pp. 211.

CURRENT interest in drug addiction amongst young people in this country makes all the more topical the publication of this book, which lucidly sets out the experiences of its American authors in dealing with adolescent addicts. The problem of juvenile drug addiction is no new-world monopoly but occurs in many countries. The present work is by a number of contributors, whose narratives are skilfully woven into a whole study, covering such diverse aspects of drug addiction as the use by young people of marihuana, the inhalation of commercial solvents, institutional treatment, etc. The editor, Dr. Harms, sums up that the book gives the results of the efforts of practical workers, some of whom have for years devoted themselves to living with and listening to young drug addicts. The study will be of special interest to those members of the pharmaceutical industry whose work involves producing therapeutic agents for use in the treatment of drug addiction.

Pharmacy as a Career

L. G. MATTHEWS. *B. T. Batsford, Ltd.*, 4 Fitzhardinge Street, Portman Square, London, W.1. 7¼ × 5 in. Pp. 119. 13s. 6d.

THE purpose of any book describing a career must surely be, in addition to informing them of its requirements and means of entry, to attract potential entrants to take it up. The author has been most thorough in acquiring and presenting his facts, but it is to be doubted whether the book will attract the school leaver to choose pharmacy in preference to other professions open to him. In nine chapters Mr. Matthews summarises the history of the profession, explains the routes to qualification and outlines the functions of pharmacists in general practice, hospital, the public services, the Armed Forces, industry, teaching, journalism and publicity. He discusses the rôle of the pharmacist in the National Health Service and lists professional associations, prizes and research awards. The book has fourteen photographic illustrations, of which no less than ten show industrial procedures. In relation to the deployment of pharmacists, that can hardly be said to be a balanced picture, especially as the activities illustrated are mainly those (chemical research, bacteriology, pharmacology) for which the industry has—deplorably from the point of view of the profession—been turning increasingly to the specialist (and non-pharmacist). The student who is led to expect that his employment lies in those fields may be in for a disappointment.

Organic Name Reactions

M. KRANCH and W. KUNZ (TRANSLATED by J. M. HARKIN), *John Wiley & Sons, Ltd.*, Glen House, Stag Place, London, S.W.1. 9 × 5½ in. Pp. xxiii + 620. 120s.

IN an attempt to promote systematic development of a terminology for describing organic reactions, the authors have compiled a catalogue of reactions that are commonly known by the name of their originator. In the foreword to the first German edition, which is given in translation, they emphasise the desirability of developing a more informative system of classification than that afforded by an author's name. They consider, however, that few reactions have been sufficiently investigated to permit adopting a terminology based on reaction mechanisms, and they suggest that the significance of a reaction is based on the evaluation criterion applied to it. They suggest descriptive alternatives for reaction names where none existed in the literature, and briefly explain reactions and give references to the literature. An addendum contains additional references. Basis for inclusion of a reaction has been the frequency of its mention in standard text books. Authors and subjects are indexed. The book provides a useful summary of organic reactions to 1963, the date of the second German edition from which the translation was made.

CAREERS IN PHARMACY

Guidance for future pharmacists on opportunities, prospects and conditions in their chosen profession—with a hint or two for those already qualified who may be looking for new fields to conquer.

So you want to own a pharmacy?

ADVICE FOR THE ASPIRING PROPRIETOR

By H. B. COULSON, M.P.S.

THE function of the pharmacist in society is to supply the individuals that make up the population with the medicines they require. The process of supply requires pharmacists in research, manufacturing and wholesaling, but the actual point of supply is through hospitals or retail pharmacies. In Britain about 75 per cent. of all pharmacists are engaged in retail practice, so the chances are that a new entrant to pharmacy will find himself (or herself) there. That is not at all a bad thing for he will be performing directly the function for which he has been trained—even though much of his training does not seem to enter directly into his day-to-day work (a careful analysis might show that a good deal more of that training was being used unconsciously than is generally realised). The work is satisfying—ministering to the needs of others and especially to those in trouble, always is; it is highly responsible—one holds people's lives in one's hands; it is interesting, with innumerable human contacts and problems; and it offers the prospect of substantial financial rewards, especially to the successful proprietor—for whom there is no ceiling.

Because a large number of present-day entrants may be expected to become proprietor pharmacists in the course of time, it should be their pre-

sent concern to prepare themselves now to become successful owners of businesses. That will involve first a look at the way in which retail pharmacy is likely to develop, secondly a decision on the type of area and type and size of business that it is eventually hoped to own, thirdly an appraisal of the type of training and experience needed for proprietorship in general and the selected type of business in particular; and finally consideration of the finance that is likely to be required (with due preparation well in advance).

In what way will retail pharmacy develop in Britain in the next thirty years or so? To some extent the writing is already on the wall. Several hundred small pharmacies are for sale and likely to prove unsaleable for the reason that their financial return to the owner is less than he could earn as an employee with no capital investment. If in due course most of them close down, the result will be fewer and larger pharmacies and the probability is that that process has a considerable way to go. The introduction of the three-year degree course, with its three A-levels entrance (as high as in any profession, and in the scientific field in which there is a wide choice of alternative subjects and competition for the same entrants) is bound to mean that entrants will not come forward unless pharmacy can offer prospects not less favourable than the competing occupations.

Financial Return

At present, on the most conservative estimate, a university graduate with an equivalent degree may expect by the age of forty to be earning £2,000 a year, with full pension rights. If one makes allowance for the pension rights and for a reasonable interest on the capital investment, the minimum required return of a pharmacy to the proprietor is brought to something in excess of £2,500. And if, as seems a likely reaction against the trend of recent years, there is a general increase in professional as against non-professional earnings—the present medical agitation is a case in point—the figure will go higher. While that requirement can be met by a pharmacy with a turnover of about £17,000 a year, it is often at about that stage that it becomes neces-

sary to employ additional and expensive assistance, so that one should probably consider a rather higher figure, say of the order of £20,000. It is a fact that the average spending (including National Health Service) per head of population in private pharmacies is about £4 per annum. The implication is therefore that the pharmacy of the future will serve a population of not less than 5,000 with pharmacies at greater distances from each other than at present. I believe that a reduction of that order in immediate competition will in fact lead to much greater co-operation between pharmacies and the formation of loosely tied groups. To make life easier for themselves while maintaining the required public service, these groups may share locums and co-operate in other ways. The indications are that economic factors may bring about a limitation of pharmacies, which in turn will make a professional and/or legal limitation much more easily possible than at present. And that in turn should bring greater prosperity to the proprietor pharmacist with less rigorous demands on his time.

Pharmacies may be roughly divided into four groups: Rural-area pharmacies, small-town pharmacies, and, in large towns, the "High Street" and the suburban shops. Medicines are, in the main, required by people where they live (as opposed to where they work)



and therefore the biggest dispensing businesses tend to be found in the residential areas. For that reason the "High Street" pharmacies with high overhead expenses usually have to rely for their incomes largely on sales (principally cosmetic, fancy, and photographic goods). Brisk sales require heavy stocks, and probably expensive staffs. Businesses of that kind can be very profitable but need a lot of capital.

Pharmacies in rural areas usually operate in a relaxed and pleasant atmosphere, and are usually the cheapest kind of pharmacies to run in stock, staff, and general overhead costs. Their scope may be limited, and they may need substantial sidelines to make them viable. They are also at present much hampered by the "mile limit." Small market towns often have about the right number of pharmacies for their population and, if they are not growing and there is no real prospect of increased competition, they often offer the safest door of entry to proprietorship, with the prospect of steady but not greatly increasing business. What I have called suburban or residential-area pharmacies constitute a vast group of widest variation. In growing areas they can offer considerable scope for increased business, though that in turn will increase the probability of competition.

The Area and the Cost

Then there is the choice of area. North, Midland, or South? High-class, middle-class or "working" class? Inland or seaside? It is safe to say that the more pleasant the area the higher the goodwill value and the fiercer the competition. Likewise the more restricted the area that is chosen the longer is the intending purchaser likely to have to wait for what he wants, and the less likely to secure it at a bargain price.

What will a business cost? Well, the price will include stock and fittings at valuation, and goodwill of up to two years' absolute net profit (by which is meant the profit left after all expenses have been paid, including the salary that would have to be paid for management if the owner were not managing the business). A stock costing $17\frac{1}{2}$ per cent. of the annual turnover is not unreasonable for a private pharmacy. For an annual turnover of £20,000, it would be £3,500. The cost of fittings is very variable — say, depreciated to £1,000. A net profit of $7\frac{1}{2}$ per cent. on an attractive business gives a goodwill figure of £3,000. Total: £7,500. Usually a bit more is expected, so, say, £8,000 purchase price. If you are a member of the National Pharmaceutical Union Business Purchase and Guarantee Fund (and as a prospective proprietor you most certainly should be) you can hope to borrow 75 per cent. of the sum that you require. So you will need an initial

capital of £2,000. But there are other ways of buying a business.

With all of this in mind you may set about getting the training and experience that you will need. First, your period of practical training. You set off with excellent technical skills, for which you have to find the practical application. And you set off with two great disadvantages that you must, and I repeat, *must*, overcome. At this stage your main knowledge and interest will probably be in dispensing, and you may be conscious of your ignorance concerning ordinary retail selling. The result is that, as a matter both of interest and of self-defence you may tend to retreat into the dispensary and stay there. That is a cardinal error. Further, in the more recent advances in medicine you may well find that you know more than the pharmacist under whom you are working. That may lead you to the wrong conclusion that he can teach you nothing, and if you adopt that frame of mind he will certainly not be able to teach you anything. Try to get under an experienced pharmacist whom you respect, and make it clear that you are anxious to learn everything that he can teach you. Then you will learn. You will need to learn not only all you can about practical dispensing, but about every single item that is sold in the shop. You can learn from other pharmacists, sales assistants, travellers, literature issued by companies, trade journals, or other books. If you have access to the N.P.U. staff training course and, in particular the "product knowledge" and "proprietor's" sections, you will find much useful information there. But never forget that the time will come when you are in charge of a pharmacy and you will then need to know "all the answers," both for buying and selling.

At this stage of your career you must also learn all you can about handling people, by which I mean achieving the results that you must achieve with as much goodwill as possible on both sides. This applies to customers, staff, doctors, and travellers. The older you get the more important will this become.

Work and Learn

While you are working for someone else, work with the same keenness and diligence that you would show if you were working for yourself—not only because that is an honest thing to do, but because in fact you are practising working for yourself! Learn about interior and window displays. Try to find out which sorts pay off and which do not. Accept gladly any responsibilities of shop routine given to you, and try to make good jobs of them. The experience that you accumulate will prove invaluable later on. Take up photography as a hobby. It is fascinating in itself, and in the course of time financially worth while.

Do not be in too much of a hurry to become a manager. You will learn more as a senior assistant and probably earn as much, and when you are adequately experienced can get a better managership. Again, when a manager do the very best you can. This is a kind of trial run to proprietorship.

Save for a Business

During all this period exercise reasonable thrift and so prepare to buy a business, and certainly join the N.P.U. Business Purchase and Guarantee Fund. The length of the period will depend on a number of factors, but two main ones will be first your feeling of being completely competent to run your business and secondly your financial readiness. To buy a small business (unless there are exceptional opportunities for expansion) may well prejudice your earning capacity for the rest of your life.

When the moment for your venture has come, you have a number of choices before you:—

- (1) to open a new business;
- (2) to buy a safe, medium-sized business, probably with the idea of changing to a larger business later;
- (3) to purchase a larger business, even though you may have to wait longer for it;
- (4) to enter into a partnership with an older pharmacist with a view to ultimate succession.

Of those choices new businesses on new housing estates are liable to be disappointing. It is essential to know the general shopping habits of the population in the area, and while waiting for the turnover to build up you may fail to earn much more than you would have had to pay in goodwill. With many good buying opportunities available (for example neglected but unopposed businesses), it is foolish to open in competition with an existing business unless the population served is ample to support two businesses.

The second possibility is attractive. Such businesses, often found in small market towns, are probably fairly safe in turnover, serving a definite population, and fairly safe from additional competition. The price may not be too high, and the value will probably not depreciate. That means earlier proprietorship, and you can sell the business and move when you are ready. The snag is that a circle of friends, a growing family, and children at the local school are factors that weigh heavily against leaving an area, whatever the financial advantages.

Buying your way into a good business over a number of years is attractive. You must, however, safeguard yourself at the outset by a suitable legal agreement. You do not, for example, want to pay for the goodwill of a business

which you, as a partner, have built up. The goal is to own a substantial business. Good luck to you! With reasonable effort you should succeed in an occupation which is rewarding and satisfying.

[More detailed information may be found in "Pathway to Proprietorship," available free of charge from the secretary, National Pharmaceutical Union, 4 Queen Square, London, W.C.1.]

Research, production, administra- tion

YOUR OPPORTUNITIES IN THE PHARMACEUTICAL INDUSTRY

By G. N. HENDERSON (information officer, Association of the British Pharmaceutical Industry).

SINCE the end of the 1939-45 war a number of new industries have arisen from comparatively recent basic scientific discoveries. Those industries are also alike in that they all employ a high proportion of science graduates and support extensive research programmes—computers, radar, atomic energy, space exploration, plastics and pharmaceutical industries are examples that spring readily to the mind. Of all those new science-based industries, the last-named, while employing the least capital, has the highest proportion of graduates. It has been said that one in every ten of the employees of the member companies of the Association of the British Pharmaceutical Industry are engaged in research.

The Openings

At the present time the pharmaceutical industry employs about 4,000 graduates in many disciplines including chemistry, physics, microbiology, mycology, medicine and pharmacy, and 2,000 of those are pharmacists. The subjects studied by the pharmacy student have, as one would expect, the widest application, and pharmacists are found not only in research and production but also in general administrative posts. It is probably true to say that a post in the industry could be found to suit the particular temperament and specialised interest of practically every pharmacist.

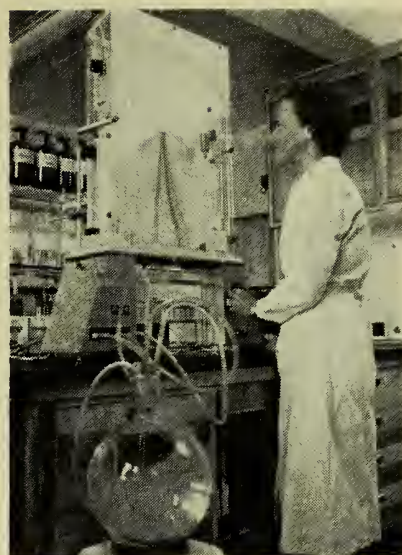
Research is the key to success in an industry that relies so much on new

discoveries in order to compete in the international market for medicines. The success of the British sector has been underlined by 1964's record export figure of £59 millions—the second highest in the world. Success in research attends upon good team work, and pharmacists find their place in the teams as pharmacologists and in the formulation and presentation of new substances both for laboratory and clinical trials and for general release. The posts go, in the main, to those with honours degrees in pharmacy, and especially to those who have acquired some experience of post-graduate research in pharmacy schools. Direction of company research teams is, of course, open to workers in any of the disciplines employed, but pharmacists do hold those appointments in some companies and more will undoubtedly achieve that distinction in the future.

Quality Control

Allied to both research and production is quality control, an increasingly important activity in all companies. Graduate personnel employed may be pharmacists or pure chemists—a fact recently recognised by the joint award by the Royal Institute of Chemistry and the Pharmaceutical Society of Great Britain of a Diploma in Pharmaceutical Analysis to those successful in an examination open to members of either body. The work is exacting, but absorbing and satisfying to those who like using analytical techniques and who aim at perfection. Here, obviously, is a job for the man with a special love of pharmaceutical chemistry, and who is imaginative enough to use his knowledge in finding ways of working out satisfactory assays for all those new chemicals which are tried out by the research teams, or which (necessarily if sadly much fewer in number) become accepted for use in the current materia medica.

Pharmaceutical production is perhaps the one sector of the industry which relies completely on pharmacists for its direction and day-to-day operation, allying as it does a knowledge of pharmaceuticals with an interest in machinery and a flair for man (and woman) management. No room here for the dreamer or for an "ivory tower" attitude to life. Production pharmacists must be practical, imperturbable, and capable of giving good leadership in the face of demands for the impossible from the sales department on the one hand and of tight-lipped criticism from the quality control department on the other. For men (or women) with the right qualities pharmaceutical production can give the nearest approach to that satisfaction which centuries of craftsmen have gained from a job well done.



Last, but far from least, pharmacists can find a worth-while career in the administration of pharmaceutical companies. The most usual entry to "office pharmacy" is perhaps via the sales department. Medical representation at one time was practically the sole preserve of the pharmaceutically qualified, but nowadays a much smaller proportion of representatives are pharmacists. That is in no way due to discrimination, since many leading companies are continually advertising for pharmacists in the pages of the professional journals, and only recruit from other sources in sheer desperation. It is perhaps a pity that more pharmacists with a suitable temperament and personality for this work do not apply, since most, probably all, promotions to posts in sales management and sales direction come via "the road." The medical representative obviously has to sell the idea of his company's products to the medical profession, but to do so successfully it is equally obvious that he must know what he is talking about, and probably only pharmacists and doctors have the perfect academic background for this very specialised form of selling. In any case, all new entrants are given extensive courses, which include the clinical, pharmacological and chemical background not only of their own company's products, but also of products of their competitors.

Information, Publicity, Purchasing

It is also possible to enter the administrative side of the industry by direct occupation of an office chair in the medical information, publicity or purchase departments. The first of those routes has long been and is still of increasing importance. The work entails much reading of medical and scientific journals and brings the pharmacist into daily contact with the research and development team "inside" and

with the medical and pharmaceutical professions "outside" the companies' walls.

In a survey such as this it is only possible to describe briefly the main possibilities open to a young pharmacist who is considering a career in the industry. Chances of promotion or advancement are considerable for the right man, but only a few can ultimately occupy the offices of managing director or chairman, and competition gets fiercer near to the top. Many pharmacists, however, have reached these dizzy heights in the past and are still reaching them today. Perhaps you who are reading this article may be signing share certificates for your company sometime in the next thirty years or so.

Pharmacy in a hospital

A CAREER THAT APPLIES ALL YOUR KNOWLEDGE

By B. H. SMITH, M.P.S.

THE student who is considering the branch of pharmacy in which to start his career will inevitably consider hospital pharmacy. Probably he will know little about it. It may well be that he has seen an old-fashioned sub-basement department that may have put him off. If, on the other hand, he has had some contact with one of the departments now being built, he will certainly have a more favourable view of hospital pharmacy in general. Because all the old-fashioned departments are gradually being eliminated, I shall attempt to describe only the modern pharmacy in the district general hospital.

The Ministry of Health "building note" that will be the basis for future planning subdivides the hospital pharmaceutical department into the following:—Dispensary; manufacturing and prepacking laboratory; sterile-products laboratory; quality-control laboratory; stores section; offices for chief pharmacist and his secretary; staff rooms; and other ancillary units. The size of each section will depend on the size of the hospital. In the smaller district general hospital some of the sections

are amalgamated and in the larger ones the pharmaceutical department becomes a small factory.

The post-graduate student is expected to spend some time in each of the sections, applying to the job of supplying a large hospital or group of hospitals the basic knowledge he has learnt at the university or technical college. He soon discovers that it is one thing to make half a dozen ampoules at college and quite another to make a batch of 1,000 ampoules in a hospital. There is a corresponding difference between making 100 mls and 30 gal. of liquor chloroxylenol. He will find there are dispensing assistants who regularly make batches of 500 suppositories and do it better than he can. Because of his training he will soon acquire the skill and consequently play an increasingly active part in the life of the department. As he gains experience he will find that he can apply all the knowledge he accumulated at college, and probably it is only in hospital pharmacy that he can do so. He will find that many chief pharmacists take pride in the variety of products they manufacture and that many commercial products began life as the brain child of a hospital chief pharmacist.

Work in Each Section

Let us consider in detail the various sections of the pharmaceutical department. In the sterile products laboratory the student will make a wide range of perfusion fluids, ampoules, bladder washouts, sterile solutions for many purposes (including foods for premature babies), eye preparations, powders and medicated gauzes. Aided and abetted by the medical staff he will produce the most exotic preparations. Many of them will disappear from the scene, but some will become standard in the hospital, and occasionally one will achieve national fame by being adopted by a commercial house or by the British Pharmaceutical Codex.

In the galenical manufacturing laboratory he will make a whole range of creams, powders, ointments, mixtures, lotions, suppositories, etc. He will have the opportunity of investigating the stability of the many preparations he has to make, packaging those items for ward use, and formulating new drugs into forms suitable for administration to geriatric patients and children. He may, in co-operation with medical and nursing staff, have the opportunity of trying out those bright ideas he may have on new formulations.

In the quality-control laboratory he will find endless opportunity for testing drugs and dressings, both those that have been purchased and those that are made in the department. He may also be called upon to identify

poisonous substances that some patient has taken.

The dispensary undertakes similar work to that in a retail pharmacy. Here the student will dispense outpatients' prescriptions and extemporaneous preparations for the wards. He will find that the medical staff do not always mean what they write down, and in many hospitals he will find that he is an integral part of the prescribing process. He will participate in clinical trials, and may work with the adverse-reactions committee of the Dunlop Committee. He will find that the telephone never stops ringing with inquiries from the medical and nursing staff, who will use him as a convenient information bureau. He will act as a poisons information centre, identifying tablets and often supplying details of antidotes and treatment.

Duties of a Chief Pharmacist

When in due course the student becomes a chief pharmacist, he will also be required to know about stock control, purchasing, contracting and office routine. If the drug bill shows a rapid rise, the Management Committee will call on him to give reasons. He will be expected to tour the wards regularly and inspect the drug cupboards, be co-opted to various committees (such as cross-infection, supplies, economy) and lecture to nurses and other types of medical auxiliary. He may have to train dispensing assistants, control a central sterile supply department, purchase and issue surgical instruments and equipment; and supply chemicals and media to the pathological laboratory. He will find that the Management Committee regard him as legal expert on the control of Dangerous Drugs and poisons. One of his more onerous tasks as chief pharmacist will be to interview and control the medical representatives who visit the hospital.



Some will co-operate, others he will find are just salesmen, "brainwashed" by their firms. With the latter he will wage continuous war. His Management Committee will send him to conferences and courses at home and overseas, and he will be looked upon as a consultant pharmacist. Manufacturing houses will ask his advice and help in promoting new products. The modern doctor will hesitate to introduce new methods of treatment without consulting him and he will have opportunity, depending on the quality of the department, to do research of various types. He may be asked to become a member of a regional advisory committee, advising his Regional Hospital Board on planning, equipment, staffing, training, standards and regional contracting. He may be appointed to a Ministry of Health committee or to a committee of the British Pharmaceutical Codex, British National Formulary or British Pharmacopœia.

At the moment the financial rewards, are—though they recently underwent an increase—still not entirely satisfactory, but by perseverance they will improve. Hospital pharmacy is a stepping stone to many other branches of pharmacy, and industry and teaching are full of ex-hospital pharmacists. Any pharmacist is the better for spending some time working as a hospital pharmacist.

Opportunities in pharmacy

1. RETAIL

PRIVATE PRACTICE

DETAILS of how to make a career in private practice, with the ultimate aim of becoming a proprietor, are given on p. 553. Salary scales vary enormously with area and type of shop, and in areas remote from London they may be low (though the cost of living difference may outweigh that apparent disadvantage). Post-graduate salaries vary according to whether the person is regarded as a trainee or as a dispensing assistant whose abilities may be fully employed, and whether an undertaking to continue working with the company for a period after registration is required. They may thus be in the range £600-850 (sometimes £900) a year. For a pharmacist in his first year after qualification, salary is likely to be £1,000-1,200, and in the second year £1,150-1,300. Managers receive from £1,400 which, after two years' experience, should be £1,500-1,600 a year.

The figures given are only a guide, actual amounts paid being both below and in excess of those stated.

BOOTS, LTD.

THE company operates about 1,300 pharmacies of widely varying types and its retail companies employ around 1,700 men and 200 women pharmacists. The newly qualified pharmacist is likely to start his career in a dispensary, where he can become familiar with current trends in prescribing, shop organisation, and general management. Later he will undertake relief duties for colleagues who are on holiday or ill. During that period he will be entirely responsible for running the shops he manages—from the dispensary to merchandising and accounts. As soon as possible after registration the pharmacist begins a nine-month training scheme, which includes a business-methods course and branch tutorials, supplementing notes supplied from head office. Selected topics in more advanced management practice are set as projects, and then discussed in regional study groups. After further experience, pharmacists felt to be ready for appointment to management are given a two-week intensive study course. There is no limit to the prospects open to the pharmacist within the company. With the right skills he may progress to territorial general manager and to executive positions—including even the board of directors. Salaries vary according to district, and for post-graduate students are in the range £850-925 a year (women £800-875). Newly registered pharmacists receive £1,125-1,200 a year (women £1,075-1,150) increasing with experience to a maximum of £1,285-1,360 a year (women £1,235-1,310). Managers' salaries are related to turnover, and total remuneration would be in the range £1,500 to over £3,000 a year.

TIMOTHY WHITES & TAYLORS, LTD.

THE company has about 500 pharmacies widely distributed throughout England, Scotland and Wales. To the post-graduate entrant is given a training designed to enable him or her to reconcile academic knowledge with the practical aspects of retail pharmacy. Training is also given in branch routine and organisation to equip the student to undertake management and control of a branch within a reasonable period of registration. To augment the training in the branch, instruction in the company's methods of accounting, stock control, display, staff control and management is given in a business course issued from the company's Leeds office. After a suitable time spent in gaining practical experience, the pharmacist becomes eligible for management of a branch. Salaries for post-graduate trainees range from £850-925 a year for

men (£800-875 for women), depending on locality. A newly qualified pharmacist can expect to receive as a minimum £1,075 a year (women £1,025), higher rates applying in London.

CO-OPERATIVE SOCIETIES

THE Co-operative movement comprises many independent societies, each operating exclusively in its own area. Many societies have pharmaceutical departments. In some, the pharmacies are organised into separate limited companies. No general picture of training and salaries applies to all. Under London Co-operative Chemists, Ltd., post-graduate training may be undertaken in one of the company's modern pharmacies. Business training is given by the pharmacy manager, supplemented by lectures by territorial managers. A period may be spent at head office, affording an opportunity to gain first-hand knowledge of modern stock-control and accounting methods. After a period of relief management the pharmacist becomes eligible for his own branch. Post-graduate trainees' salaries are set at about £900 a year, with a rise upon registration to about £1,400 a year. For managers, progressive salaries up to £2,000 a year are paid.

2. HOSPITAL

DETAILS of a career in hospital pharmacy are given on p. 556. New salary scales for hospital pharmacists have recently been agreed as follows (number of increments in parentheses):—Pharmacist, £995-1,200 (6); senior pharmacist, £1,040-1,295 (6); chief pharmacist category I and deputy chief category IV, £1,090-1,395 (7); chief pharmacist category II and deputy chief category V, £1,190-1,505 (7); chief pharmacist category III, £1,280-1,700 (8); chief pharmacist category IV, £1,325-1,830 (9); chief pharmacist category V, £1,435-2,000 (9).

Additional allowances such as London Weighting may be payable and a further sum is paid to group chief pharmacists. A post-graduate students' salary is £509 a year, plus London Weighting if applicable. At the time of going to press, however, negotiations are in progress for a substantial increase on that figure.

3. PRISON SERVICE

PHARMACISTS are employed in twelve of the large prisons in Britain, five of them in London. Minimum age for entry is twenty-five years, and the salary scales and conditions are those of the National Health Service, though an "environment" allowance of £54 a year is paid. Prison pharmacists are graded according to the hospital system as chief pharmacists, ranging from category I to category IV.

4. WHOLESALE DISTRIBUTION

ORGANISATION of the wholesale distribution of pharmaceutical products demands abilities in administration and a thorough knowledge of modern therapeutics. The business is intensely competitive, and service is therefore all-important, involving regular and frequent van deliveries and careful attention to every detail of the work flow from order office to delivery van. Because of their training, pharmacists have the ideal academic background to fit them for the administration of pharmaceutical distribution, and a high percentage of the directors of wholesale companies are in fact pharmacists. Yet the academic training is only a foundation on which to build. After gaining admission to the register the young pharmacist aspiring to this work should have some experience of general practice, preferably including a period of management of a retail pharmacy, to give him or her a working knowledge of products, business methods and, above all, an understanding of the practical demands of his or her future customers. In a wholesale house the pharmacist will have to learn new skills, including modern accounting methods. Methods vary with the size of organisation, for though the larger companies have an accountant in charge, the smaller ones are often less specialised. The pharmacist in wholesale may, therefore, be expected to master the complexities of punch-card equipment, electronic computers or embossed-plate line-selecting machines. Stock-control systems, and how to apply to them a professional judgment of possible fluctuations in product demand, will make claims on his time and understanding, as will the arrangement of stock to facilitate order assembly. He will have to acquire tact and something of the "representative" approach in order to deal with the queries of his retail and hospital customers, who will demand to speak to "someone in authority who knows what he is talking about." Above all he must acquire the art of man (and woman) management, learning to engage, train, and—more than ever now—keep staff. Starting salaries vary according to age and experience, but usually exceed £1,000 per annum, and are sometimes as high as £1,500 at commencement. Annual increases are common plus—in some companies—bonuses varying with net profits. Some wholesalers operate pharmaceutical manufacturing laboratories and any such companies may be prepared to take on post-graduate students, who are thus afforded the opportunity of becoming acquainted with more than one branch of the profession during their practical training.

5. TEACHING

THE duties of a teacher in a school of pharmacy should be familiar to every student, and those with a liking for college or university "atmosphere" and who think they have the necessary academic qualifications, have many advisers at hand from whom they may seek further information. Entry into this branch of pharmacy usually requires the newly qualified pharmacist to undertake research. He may do so on a full time basis for a higher degree, in which case research awards by the Department of Scientific and Industrial Research or Medical Research Council may, if he is an honours graduate, be available. Some schools offer research assistant posts, which carry a salary (about £900 a year) and involve lecturing to undergraduates up to a maximum of six hours a week. Such assistants may work for higher degrees. For those with previous research experience, research fellowships may be available carrying a salary of about £1,700 a year. Teaching appointments usually begin at assistant lecturer level which, in the universities, attracts £1,050–1,275 a year. Promotion may occur to lecturer grade (£1,400–2,505), senior lecturer or reader (up to £3,250) and professor (£3,400–4,750). In the colleges, scales are lower: £830–1,760 for assistant lecturer; £1,670–1,895 for senior lecturer; £2,115–2,310 for principal lecturer (who will be competent to initiate and direct research).

6. ARMY

THE Ministry of Defence Army Department has vacancies from time to time for civilian pharmacists to be employed in military hospitals in the United Kingdom. Appointments are for an initial period of three years, renewable thereafter according to the Department's staffing requirements and the pharmacist's wishes. Both male and female candidates are considered. Appointments are graded chief pharmacist in category I, II or III hospitals and salary scales are those for the equivalent post in a National Health Service hospital. Similar posts are also available overseas, but salaries are augmented by "London weighting" and foreign service allowance (non-taxable) varying with the country and pharmacist's salary. Families may accompany the pharmacist, when further allowances become payable. Duties are similar to those of a chief pharmacist in a civilian hospital but the pharmacist is assisted by Army dispensers, and participates in their training. Inquiries should be addressed to the Ministry of Defence, C.E.2 (Army), Whitehall, London, S.W.1.

7. NAVY

THE Royal Navy's pharmaceutical service comprises civilian pharmacists who normally enter at basic grade and advance to senior, superintending, chief and head-pharmacist posts. Apart from the head pharmacist, who serves in the department of the Medical Director-General (Naval), Ministry of Defence, pharmacists are appointed to R.N. hospitals and medical depôts in the United Kingdom and overseas (where they serve at the R.N. hospitals Malta and Gibraltar or at the R.N. medical depôt, Singapore). Basic and senior grades have normal hospital pharmaceutical duties, which may include tuition of the nursing staff. Superintending pharmacists may be in charge of a R.N. medical depôt or the pharmaceutical department in a small hospital. They may also act as deputy to a chief pharmacist controlling a central store depôt or the pharmaceutical department and service-afloat store of a large hospital. Conditions of service are linked to those for pharmacists in National Health Service hospitals. Basic and senior grades are equivalent to the same grades in the N.H.S.; superintending and chief pharmacist grades are equivalent to category II and category V chief pharmacist respectively. Pharmacists appointed to overseas establishments are paid foreign service allowance. Further information may be obtained from the Medical Director-General (Naval), Ministry of Defence, Empress State Building, London, S.W.6.

[The Royal Air Force does not employ pharmacists.]

8. OVERSEAS

FOR the specially self-reliant and adventurous, a career in pharmacy overseas offers attractive prospects. Perhaps the widest experience may be gained in territories where several manufacturers operate through the same agent and have no direct subsidiary companies. The agent will undertake import, warehousing, distribution and promotion of the manufacturer's goods. Pharmacists are employed in the first instance because of their qualification (for the control of poisons) and their knowledge (they will be in sole charge of "ethical" pharmaceuticals, supervise representatives and devise promotional schemes). To start on the ladder of promotion, the pharmacist must be prepared to widen his horizons to include marketing and administration and to accept responsibility for other "chemists' goods" such as cosmetics and toilet preparations. Experience after qualification is not essential, though a short period spent in retail pharmacy or

representation may later prove an advantage. Initial training before departure overseas usually comprises some time spent in seeing how "head office" is organised (including possibly the shipping and accounts departments) and visits to manufacturers for short courses of instruction. It is certain that this branch of pharmacy can offer most new graduates an opportunity to raise their standard of living more quickly than is usually possible in Britain.

Annual salary on starting with some of the larger companies might be in the range £1,400-1,500, with "all found" and a company car. After a first tour of eighteen months or two years, the pharmacist is entitled to three or four months' leave on full pay. If married, his family will accompany him and be fully accommodated. Educational allowances for children left in Britain are among fringe benefits later available. To those reaching the top, salaries of £4,000-5,000 a year may be paid. Opportunities overseas are, of course, not confined to the specialist companies described above. Many manufacturing houses have associate companies overseas and suitable staff may complete a tour in one or more of them, thus enabling some of the "overseas" advantages to be combined with a career based on the United Kingdom. Sometimes posts in a particular country are advertised. Other openings occur, especially in Commonwealth countries, for permanent positions in hospital pharmacy and, for those with the right academic background, in education.

Elsewhere in this issue are given details of attractive employment with the Ministry of Health of the Government of Zambia.

9. INDUSTRY

PROSPECTS for pharmacists entering the pharmaceutical industry are outlined on p. 555. It is impossible to give precise salary scales because they vary greatly according to company and the nature of the employment. The direct entrant from university might expect to receive about £800-900 a year, rising to £1,100-1,300. Thereafter progress depends upon promotion or movement to higher scales.

10. OTHER OPENINGS

WHILE the majority of pharmacists will find their place in one of the branches mentioned above, there are many other openings for small numbers of entrants. These include the headquarters staffs of pharmaceutical organisations, pharmaceutical journalism and posts with the Ministry of Health.

How to qualify

1. GREAT BRITAIN

TWO academic routes are at present open to students who decide to take up pharmacy as a career. They may either prepare for the Pharmaceutical Chemist diploma awarded by the Pharmaceutical Society of Great Britain or—the more usual route today—for a degree in pharmacy approved by the Society for registration purposes.

The Diploma

A person who intends taking the diploma course should first register as a "student" with the Pharmaceutical Society, 17 Bloomsbury Square, London, W.C.2 (fee £4 4s.). To rank for entry in England and Wales the candidate must have gained passes at advanced level of the General Certificate of Education in chemistry, physics and either biology, botany, mathematics or zoology. The Society has its own Entrance examination in chemistry, physics, biology and mathematics that may be taken in the still outstanding subject or subjects for students who have two advanced level passes, but whose subjects differ from those named.

Prospective entrants from Scotland should have passed any examination or examinations that would be accepted by the Scottish Universities Entrance Board as qualifying for the Board's Attestation of Fitness. An acceptable alternative is the Leaving Certificate examination of the Scottish Education Department or the Scottish Certificate of Education or a certificate of having passed the Scottish Universities Preliminary examination in four subjects at the higher grade, or in three subjects at the higher grade and two subjects at the lower or ordinary grade. The entrant must then pass either the Society's Entrance examination in all subjects to qualify for registration as a student or pass the appropriate subjects in the General Certificate of Education at advanced level. The first degree examination of a Scottish University is also acceptable, provided it has been passed in the subjects of the Entrance examination. If the examination has been passed in only two of the required subjects, the third may be taken in the Society's Entrance examination. That examination is held in March, June and September (fee £3 3s. for each subject).

The next step for the student to take is to attend a full-time course at a school of pharmacy for the Pharmaceutical Chemist Qualifying examination. The subjects for study are pharmacognosy, pharmaceutical chemistry, physiology, pharmacology and pharmaceuticals. The course extends over three years and is divided into three parts. The student is examined in pharmacognosy, pharmaceutical chemistry and physiology at the end of the first year (written papers only); in pharmacognosy, pharmaceutical chemistry and pharmaceuticals (written and practical) at the end of the second year. At the end of the third year there are a written examination in pharmaceutical chemis-

try, a written and an oral examination in pharmacology and written, practical and oral examinations in pharmaceuticals.

Examination fees are £3 3s. for each subject in the first year and £4 4s. per subject in the following years. As well as passing the Qualifying examination a student must complete a course of practical training of not less than one year before being admitted to the Pharmaceutical Register.

The training may be done in a pharmacy, a hospital pharmaceutical department or a pharmaceutical manufacturing laboratory. Practical training obtained under other conditions may, after consideration, be accepted by the Council of the Pharmaceutical Society. At the time of going to press, the training may be undertaken either before or after the three-year full-time course of study, but proposals by the Council to recognise only post-collegiate training are at present being considered by the Privy Council. A declaration form is available from the secretary and registrar upon which the student should return details of the premises at which training was undertaken, the date that it commenced, and a statement from the pharmacist responsible that the training has been completed to his satisfaction. On completion of the year's practical training the student may apply for registration as a pharmacist.

Degrees in Pharmacy

Degrees of the following universities are at present approved by the Pharmaceutical Society for registration purposes:—Glasgow, Leeds, Liverpool, London, Manchester, Nottingham and Wales. Graduates holding those degrees may apply for registration as a pharmacist, without further examination by the Society, but must first complete a period of practical training identical with that for diploma students. Entrance requirements approximate, in general, to those for the diploma but some variation between the universities does occur. (The Pharmaceutical Society's entrance examination is not recognised.) Particulars should always be sought from the university at which the student intends to study.

As a result of the Robbins report on higher education, university status is being granted to the Colleges of Advanced Technology, four of which—Birmingham, Bradford, Bristol and Chelsea—have schools of pharmacy, and to the Heriot-Watt College, Edinburgh.

These five new universities will be granting their own degrees in pharmacy and it is anticipated that students enrolling for a pharmaceutical course at any one of them in the 1965-66 session will be eligible to sit for the new degrees.

A further change at present taking place is that all regional colleges are in the process of formulating courses

of instruction that will, when approved, lead to the award of a degree by the Council for National Academic Awards (C.N.A.A.). It will involve all those colleges with schools of pharmacy that are not becoming universities in their own right and it is thus possible (though at the present stage of the transition, by no means certain) that all seventeen pharmacy schools will be offering a degree course to students enrolling for the 1965-66 session.

All degree courses are basically general and all will be formulated to allow the graduate to register as a pharmaceutical chemist. However, while some universities require three years for a general degree, others allow for some measure of specialisation in the final year. Sometimes both courses may be available in the same university, when the choice will depend upon the ability and aptitude of the student.

Applications for places in the universities and the Colleges of Advanced Technology must be made through the Universities Central Council on Admissions, 29 Tavistock Square, London, W.C.1, from whom forms of application and a booklet "How to Apply for Admission to a University" may be obtained. *Applications normally have to be lodged before a date in December of the year preceding admission.*

Degree students may, if they wish, register as Students with the Pharmaceutical Society, in which event they will have access to branch meetings and to some of the Society's facilities.

The Schools and their Addresses

- ABERDEEN:** Robert Gordon's Technical College, Aberdeen.
BELFAST: Belfast College of Technology, Belfast.
BIRMINGHAM: College of Advanced Technology, Gosta Green, Birmingham, 4.
BRADFORD: Bradford Institute of Technology, Bradford, 7, Yorks.
BRIGHTON: Brighton College of Technology, Moulsecoomb, Brighton, 7.
BRISTOL: Bristol College of Science and Technology, Ashley Down, Bristol, 7.
CARDIFF: Welsh College of Advanced Technology, Cathays Park, Cardiff.
EDINBURGH: Heriot-Watt College, 79 Grassmarket, Edinburgh, 1.
GLASGOW: School of Pharmacy, University of Strathclyde, Glasgow, C.1.
LEEDS: Department of Pharmacy, School of Medicine, University of Leeds, Leeds, 2.
LEICESTER: Leicester College of Science and Commerce, The Newarke, Leicester.
LIVERPOOL: College of Technology, New Building, Byrom Street, Liverpool, 5.
LONDON: School of Pharmacy, University of London, 29 Brunswick Square, London, W.C.1.
 Chelsea College of Science and Technology, Manresa Road, London, S.W.5.
MANCHESTER: Department of Pharmacy, The University, Manchester.
NOTTINGHAM: University of Nottingham, University Park, Nottingham.
PORTSMOUTH: College of Technology, Park Road, Portsmouth, Hants.
SUNDERLAND: Sunderland Technical College, Sunderland, co. Durham.

2. NORTHERN IRELAND

TO be eligible for registration as a "student" a candidate must have passed in the following subjects of one of the recognised examinations: English language, a mathematical subject, physics, chemistry and any other subject. If the subjects have not been taken at the one occasion then at least one of the subjects must have been passed at advanced level or marks equivalent to the credit standard in the Grammar School Senior Certificate examination of the Ministry of Education for Northern Ireland must have been obtained in at least two of the subjects taken at Ordinary Level. The following examinations are recognised:

The Grammar School Senior Certificate and the General Certificate of Education examinations of the Ministry of Education for Northern Ireland. The Leaving Certificate examination of the Scottish Education Department. The General Certificate of Education examination of the following examination bodies: University of Bristol, University of Durham, University of London, Cambridge Local Examinations Syndicate, Oxford and Cambridge Schools Examining Board, Oxford Local Examinations Delegacy, The Associated Examining Board for the General Certificate of Education, Joint Matriculation Board of the Northern Universities, Southern Universities Joint Board for School Examinations, Welsh Joint Education Committee.

Part I Qualifying Examination

After registration the student must attend a one-year full-time course of instruction in the subjects biology, physics and chemistry. A student who has failed on three occasions to pass the examination may be permitted a fourth attempt only if so recommended by the board of examiners. A student who has passed the examination must then serve an apprenticeship for two years under a registered pharmacist.

Part II Qualifying Examination

After completion of apprenticeship the student must attend a two-year course of study for the Part II Qualifying examination which is divided into:

Part A: Pharmaceutical chemistry I, pharmaceutics I, pharmacognosy and physiology.

Part B: Pharmaceutical chemistry II, pharmaceutics II, and pharmacology.

A student who passes the Part A examination or who fails to satisfy the board of examiners in only one subject may attend the course of instruction in the Part B subjects. A student who fails to satisfy the board of examiners in two only of the Part A subjects must re-attend the course of instruction in those subjects before again presenting himself for examination. He may at the same time attend the lectures in pharmacology. If a student fails to satisfy the board of examiners in three or more of the Part A subjects he must re-attend the course in all four subjects before again presenting himself for examination. On passing the Part II Qualifying examination, provided he is not less than twenty-one years of age, the student is eligible to be registered as a Pharmaceutical Chemist. A person who has passed the final examination for the degree of pharmaceuticals of the Queen's Univer-

sity, Belfast (see below), and who satisfies the examiners in such other subjects as the Council may determine shall, if his apprenticeship is completed, be eligible for registration as a Pharmaceutical Chemist.

For registration as a student the fee is £4 4s. The fee for Part I Qualifying examination is £6 6s. for the first occasion and £4 4s. for subsequent entry; for the Part II examination the fee is £3 3s. for each subject.

Further information may be obtained from the Secretary, Pharmaceutical Society of Northern Ireland, 73 University Street, Belfast.

Degree in Pharmacy

A course for the degree of B.Sc. in pharmacy of Queen's University, Belfast, is available at Belfast College of Technology (but expected to be transferred to the University in the near future). A candidate must pursue, as a matriculated student, a course of study extending over four years and pass the examinations of each year. Exemption from (i) a year's attendance and (ii) attendance and examination in the subjects of the first-year course, may be granted to students who, in the opinion of the Faculty, have attended equivalent courses and passed equivalent examinations. Subjects of the course are: *First year*, chemistry, physics, mathematics, botany, zoology. *Second year*, chemistry, microbiology, pharmacology I, pharmacognosy, pharmaceutics I. *Third year*, chemistry, pharmacology II, pharmaceutics II. *Fourth year*, pharmaceutical chemistry, pharmaceutics. A student is not permitted to enter upon the third-year course who has not passed, or been exempted from, the first-year examinations, or upon the fourth-year course who has not passed the second-year examinations. The award of honours is determined by the candidate's results in the fourth-year examinations.

3. REPUBLIC OF IRELAND

STUDENTS in the Republic of Ireland have the choice of two courses: the course leading to the qualification of pharmaceutical chemist and the course leading to the qualification of pharmaceutical assistant.

Pharmaceutical Chemist Qualification

A student who wishes to become a pharmaceutical chemist must (a) register with the Pharmaceutical Society of Ireland; (b) enrol in University College, Dublin, for a three-year course leading to the degree of B.Sc. (Pharmacy); (c) devote one year to practical training in an approved pharmacy; (d) pass an examination in forensic pharmacy conducted by the Pharmaceutical Society of Ireland.

A student should first apply to the Registrar of the Pharmaceutical Society of Ireland for a form of application, which must be completed and returned with (i) evidence that the applicant has passed English, Irish, Latin, mathematics and another subject in the Matriculation examination of the National Uni-

versity of Ireland;* (ii) a copy of his birth certificate; (iii) a registration fee of £4 4s.

Application for preliminary registration should be made by post on, or before, September 1.

Admission

No student will be admitted to University College, Dublin, for the Pharmaceutical Science course who will not have attained the age of seventeen on January 15 of the year following entry. Students must register, by personal attendance, at the time appointed for their year and faculty. College fees are about £90 a year for students whose home residence is in Ireland on September 5 of the year they enter college. For all other students, fees payable are about 50 per cent. greater. Candidates for the B.Sc. (Pharmacy) degree are required to pass (i) the first University examination in pharmaceutical sciences; (ii) the second year College examination in pharmaceutical sciences; (iii) the final examination for the degree of B.Sc. (Pharmacy). Students preparing for the first University examination in pharmaceutical sciences must attend U.C.D. for three terms, and must present themselves for examination in experimental physics, chemistry, botany and zoology. Students must pass the examination as a whole and no exemptions are granted. Successful candidates are then required to attend a second and third-year course at the College of Pharmacy and U.C.D. for six terms. The subjects for the final examinations are pharmaceutical chemistry, pharmacognosy, pharmacology and pharmaceuticals.

A student who has passed the Degree examination must devote one year to practical training in a pharmacy (approved for that purpose by the Council of the Pharmaceutical Society of Ireland) to become eligible to enter for the Pharmaceutical Licence examination conducted by the Society. The subject of this examination is forensic pharmacy and successful candidates are eligible for registration as pharmaceutical chemists. The fee for registration is £10 10s.

Pharmaceutical Assistant Qualification

Pharmaceutical assistants may not conduct pharmacies on their own account, but may carry out the duties of a pharmaceutical chemist during the temporary absence of the latter. A student who wishes to take the Pharmaceutical Assistants' course must apply for preliminary registration with the Society and must submit evidence that he or she has passed Irish, English, Latin or Greek or a modern European language, mathematics and a fifth sub-

ject in (a) the Matriculation examination of the National University of Ireland; (b) the Leaving Certificate examination; or (c) any examination of equivalent standard conducted outside the State which may be accepted by the Council. The registered student serves three years as an apprentice in an approved pharmacy and then attends the College of Pharmacy for a course of lectures lasting approximately six months. The Pharmaceutical Assistants' examination is held at the conclusion of the course and successful candidates are entitled to registration. Fees are:

Preliminary registration, £4 4s.; Assistants' course, £30; Assistants' examination, £3 3s.; registration, £2 2s. Pharmaceutical Assistants who wish to proceed to the qualification of Pharmaceutical Chemist must attend the lectures prescribed in the Pharmaceutical Chemists' Regulations but will not be required to serve any additional period of practical training.

Further information on qualifications in the Republic may be obtained from the Registrar, Pharmaceutical Society of Ireland, 18 Shrewsbury Road, Ballsbridge, Dublin, 4.

Beyond the Degree

OPPORTUNITIES FOR POST-GRADUATE STUDY

ABERDEEN: No post-graduate courses offered.

BELFAST: M.Sc. and Ph.D. by thesis. For M.Sc. the graduate must pursue a course of research for not less than two years for a pass graduate or one year for an honours graduate. The honours graduate may proceed to Ph.D. by undertaking research for not less than two years in the case of full-time research studies and not less than three years in other cases.

BIRMINGHAM: Degrees of the new university are expected to be M.Sc. and Ph.D. The Masters' degree may be by a special course or by research and thesis in the following subjects:—Pharmaceutical technology, medicinal chemistry, toxicology. Doctors' degree is by research and thesis only.

BRADFORD: The following degrees of the new university are planned:—A Masters' degree, which may be by study for one academic year full-time in either medicinal chemistry, pharmacological methodology, industrial pharmacy, plant protection or pharmacy practice. The degree may also be obtained by thesis after a minimum of one year's full-time research. A doctors' degree will require a thesis based on a minimum of three years' full-time research.

BRIGHTON: M.Pharm. and Ph.D. of London University (q.v.). Subjects offered are pharmaceutical chemistry, pharmaceuticals, pharmacology and pharmacognosy. Research may also be undertaken for Ph.D. degrees within the faculties of medicine or science.

BRISTOL: Masters' and doctorate degrees of the new university are planned. The school will also develop one-year post-graduate courses leading to Masters' degrees by formal study when space permits. Research may be in all pharmaceutical subjects, particular interest centring around biochemical pharmacology, microbiology and pharmaceuticals. The school has developed a large research team to investigate problems in ophthalmology.

CARDIFF: M.Pharm. and Ph.D. of the University of Wales.

EDINBURGH: Degrees of M.Sc. (by thesis and supervised work) and Ph.D. (by research work and thesis) of the new university are planned.

GLASGOW: M.Sc. and Ph.D. The course of study for M.Sc. must occupy

at least one year for first- and second-class honours graduates and two years for others. For Ph.D. the course is usually not less than three years. Course work for Ph.D. will be special study or research leading to the submission of a thesis, and an oral examination. Similar requirements may apply to M.Sc., or there may be prescribed courses of instruction leading to written and/or oral examination. Both courses will be available in all branches of pharmacy.

LEEDS: M.Sc. and Ph.D. awarded on research and presentation of a thesis. Subjects available are pharmaceutical chemistry, pharmacology, pharmaceuticals and pharmacognosy. Students proceeding to post-graduate work in pharmacology usually do so after obtaining the bachelor degree in pharmacology (requiring one further year after graduation in pharmacy at Leeds).

LIVERPOOL: The college fellowship (F.C.T. (Liverpool)) is awarded for approved research work carried out in the college over a period of at least two years, full- or part-time. A thesis must be submitted and the work of the candidate should make a distinct contribution to existing knowledge. The work may be in any pharmaceutical subject.

LEICESTER: Research assistantships are available in pharmacology, pharmaceuticals and pharmaceutical chemistry.

LONDON (CHELSEA): M.Phil., Ph.D. and M.Sc. of the new university. M.Phil. will take a minimum of one year full-time research or two years part-time for an honours graduate of a university of the United Kingdom. The degree of Ph.D. will take a minimum of two years (usually three) full-time research. Research problems are available in all subjects taken in the B.Pharm. degree and work is proceeding in the following areas:—Physical aspects of pharmaceuticals, pharmaceutical microbiology, radiation microbiology, medicinal chemistry, drug distribution metabolism and biochemical pharmacology, physical aspects of pharmaceutical chemistry, pharmacognosy and pharmacology. M.Sc. is by course work and three pharmaceutical courses are envisaged:—Pharmaceutical technology, drug analysis and biopharmacy (designed to bridge the gap between the

*A student who has passed the specified subjects in the Leaving Certificate examination of the Department of Education or in the Grammar School Senior Certificate examination, may effect registration as a matriculated student of the National University of Ireland by making application to the Registrar, National University of Ireland, 49 Merrion Square, Dublin 2. Early application is essential. Students seeking exemption from the Matriculation examination of N.U.I. should communicate with the President of University College, Earlsfort Terrace, Dublin, submitting certificates of examinations passed, a birth certificate and a recent reference. Students educated outside the State are not required to have passed Irish.

pharmacist and the physician, particularly in hospitals and in industry). Another course leads to the degree of M.Sc. in the history and philosophy of science as a basis for subsequent research in the history of pharmacy for Ph.D. This course is of two academic years full-time.

LONDON (SCHOOL OF PHARMACY): M.Pharm., M.Sc. or Ph.D. in either the faculty of medicine or of science. At present courses are offered by research only in the following subjects: Pharmaceutics, pharmaceutical engineering science, pharmaceutical chemistry, pharmacognosy or pharmacology. For Masters' degrees not less than one year full-time (usually two years) is required. For Ph.D. not less than two years full-time (usually three years) is required. Proposals are under consideration by the University of London for the introduction of one-year Masters' courses of instruction to be followed by examinations, but such courses *will not* be available in the School of Pharmacy in the session 1965-66.

MANCHESTER: M.Sc. and Ph.D. and D.Sc. M.Sc. is awarded after one year's full-time research and a thesis. Graduates from other universities must normally attend Manchester University for two years, Ph.D. is by two years' re-

search work and the presentation of a thesis. D.Sc. is conferred by the University in recognition of published work of high distinction resulting from research (seldom less than 10-15 years from graduation). Subject headings for research are:—Microbiology, radiation biology, plant constituents, chemistry and pests.

NOTTINGHAM: M.Pharm. and Ph.D. Both available in pharmaceutics, pharmacognosy, pharmacology and pharmaceutical chemistry. Both degrees are by research and the presentation of a thesis. The M.Pharm. normally takes two years and Ph.D. three years.

PORTSMOUTH: M.Pharm. and Ph.D. of London University. Research fields available are microbiology, medicinal chemistry, pharmacognosy, physical pharmacy, pharmacology, pharmaceutical technology, pharmaceutical administration and agricultural pharmacy. It is hoped that degrees of M.Pharm., M.Phil. and Ph.D. of the Council for National Academic Awards may be offered in the near future.

SUNDERLAND: M.Pharm. and Ph.D. of London University by research. The M.Pharm. is a two-year course and the Ph.D. three to four years. Subjects offered are pharmaceutical chemistry,

pharmacology, pharmacognosy and pharmaceutics including microbiology. Post-graduate degrees of the C.N.A.A. are anticipated in the near future.

DIPLOMA IN PHARMACEUTICAL ANALYSIS

The Pharmaceutical Society of Great Britain and the Royal Institute of Chemistry collaborate in the award of a Diploma in Pharmaceutical Analysis. Entrants for the examination must be members of either body and must have had comprehensive experience—usually of at least five years' duration—in the analysis of pharmaceutical material. The examination consists of two sections, the first a paper in chemistry or pharmacy and the second a theoretical examination comprising separate written papers in general topics relating to pharmaceutical quality control, biological and pharmaceutical principles of pharmaceutical analysis and physical and chemical principles of pharmaceutical analysis, each of three hours duration. The practical test comprises not more than five 7-hour papers. Details of the regulations may be obtained from the secretary and registrar of the Pharmaceutical Society, 17 Bloomsbury Square, London, W.C.1, or from the Institute.

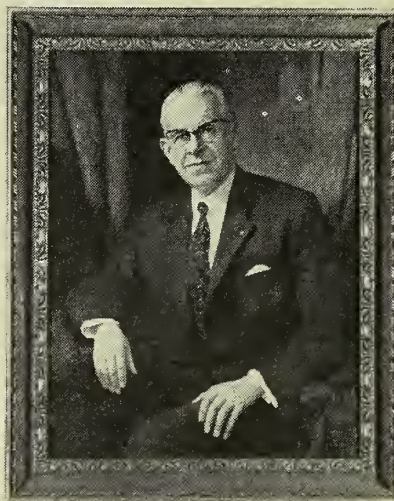
GOLDEN JUBILEE AT FELTHAM

A staff and civic occasion

TO mark the fiftieth anniversary of the company's foundation, E. Moss, Ltd., chemists, Feltham, Middlesex, organised a party for directors, shareholders, managers, staff and friends on May 19.

Present to propose a toast to the company was the Charter mayor of the new Greater London Borough of Hounslow (ALDERMAN E. J. PAULING, J.P., formerly mayor of Feltham in which the business originated), who felicitously remarked that he was technically within the neighbouring borough of Hillingdon (the venue was the Airport hotel facing the entrance to London Airport) in which the company's first branch (at Hayes) had been opened by the founder (the late Mr. Edgar Moss, M.P.S.) in 1921. The first pharmacy, acquired in 1915, was at 48 High Street, Feltham, in which town, at Fern Grove, is located the company's head office and warehouse. The founder of the business, said Mr. Pauling, had been an unusual man. Handicapped by severe ill-health during his childhood, and able to receive only limited education, at twenty he studied at night to fill the gaps in his earlier education, and eventually entered Manchester College of Pharmacy to qualify as a pharmacist in 1902 at the age of twenty-three. In the next thirteen years he widened his knowledge with management positions in the Potteries, Wales, the Isle of Wight and Torquay. In 1915 he threw up an established position to acquire the chemist's business at Feltham. By 1923, with two more branches at Hanworth and Shepperton, he opened his first warehouse in a corrugated iron army hut in Ashfield Avenue, Feltham, thus beginning the centralised buying, distributing and administrative organisation now established at Fern Grove.

By 1934 eight branches were in being and the business was converted into a limited company. Mr. Moss was



The portrait presented to Mr. H. G. Moss.

joined on the board by his son (Mr. H. G. Moss, M.P.S.) and by Messrs. K. W. Richardson, M.P.S., and J. R. James. The company now operates thirty-six pharmacies and three specialist photographic shops. A feature of the Moss shops, said the mayor, was that the staff appeared pleased to serve. They were encouraged to take an interest in the company's finances, and he hoped the business would long remain a private company.

Highspot of the party was the presentation to the present chairman and managing director (Mr. H. G. Moss) of his portrait in oils by the artist

Howard Barron, A.R.A.S. The painting was unveiled by MR. RICHARDSON, who said he could not do better than re-speak words spoken at the unveiling on an earlier occasion of a portrait to the founder: "We desire that a tribute shall be made that in a transitory world may be of some endurance." He paid tribute to the subject's important work for fellow pharmacists, especially as chairman of the Central N.H.S. Committee, and to his "always finding time to see the other man's point of view." MR. E. F. WESTON, on behalf of shareholders of the company, gave details of the company's financial progress to a point at which its assets were worth £500,000, and said that what he admired most about Mr. H. G. Moss was the humanity he had inherited from his father. The company had been one of the first to introduce a pensions scheme for its staff. On behalf of the staff Mr. J. F. Moody (a manager with the company for twenty years) said the portrait was given with the sincere regard and affection of all of them.

After bouquets had been presented to Mrs. Moss by Mrs. Clifton (oldest serving members of the company's staff) and to the mayoress by Mrs. John Smithers (daughter of Mr. and Mrs. Moss), MR. E. W. THOMPSON presented Mr. Moss, on behalf of shareholders and senior staff, with a cut-glass wine decanter and glasses. In acknowledgment, MR. MOSS described the circumstances in which his father had set up in business at Feltham and paid tribute to the high standards he had set. The new portrait, he said, would eventually become the property of the company, and he would be proud indeed if it were considered worthy of a place next that of his father.

Branch Representatives' Meeting

A CHANGE OF ARRANGEMENTS IN FUTURE

BY contrast with the turbulent annual meeting on Wednesday evening, the Thursday morning session of the Branch Representatives' meeting on May 20 was quiet and unexciting. Time and again the voting on the early motions went with the advice from the platform, and not until the adequacy of the present practical training as preparation for registration as a pharmaceutical chemist came up was a motion carried against the Council's recommendations.

The meeting opened [after Mr. Maplethorpe had announced from the chair the arrangements for the adjourned annual meeting (see p. 547)], with a statement by him as chairman about a pending change in the arrangements for Branch Representatives' meetings. Before the 1964 meeting, he recalled, branch secretaries had been called together to discuss the motions that had been sent in, and they had had power to amend them; in no sense had it been the intention to suppress or censure the motions. The same procedure had been repeated this year. It had proved workable and should now be regarded as part of future proceedings. Until now the system had been for the branches to be invited in September to send in their motions with December 10 as the last date for acceptance. After review by the Council in the following January, the list had been circulated to branches for their amendments. That procedure had not proved satisfactory, the amendment stage reducing the time for discussion on the motions. The Council now suggested that in future the president should invite amendments at the meeting itself. It was also intended that tellers should be appointed at the start of each meeting. [When that was done on May 20 the tellers chosen were Messrs. A. G. M. Madge, T. W. Fisher, R. Clitherow and C. E. Turner.]

First Motion

The first motion to be discussed was by Dudley, Stourbridge and District:—

THAT it is the opinion of this meeting that the Society should continue to encourage co-operation between branches and schools of pharmacy for the promotion of pharmacy as a career at local careers exhibitions and conventions.

Moving it MR. C. G. MURRAY said that the branch had been in ignorance when the motion had been formulated, of the part played by the Society in providing material for such exhibitions. Since then material had been received from headquarters and used, and there was now no difficulty with the Society on that score. Some members, however, would like a sort of public relations officer to be available from headquarters at such exhibitions. An amendment by Folkestone Branch urged that the words "continued to" should be deleted, as should the words "at local careers exhibitions and conventions," and that after the "schools of pharmacy" should be inserted the words "on the one hand and grammar schools

on the other." Folkestone thought, said MR. P. F. SLOPER, that the resolution would be improved by emphasis on the grammar schools, because that was where the young formulated their ideas on careers.

From the platform MISS M. A. BURR said that the Society had taken a particular interest in careers exhibitions and had provided material to no less than 146 exhibitions or conventions and distributed 10,000 copies of its careers booklet each year. 5,000 copies of the booklet had been supplied to the Central Youth Employment Bureau for the use of schools in Great Britain offering education up to the level required for entry into pharmacy. Local branches were advised of any exhibitions taking place in their area, and schools of pharmacy had co-operated in organising exhibitions; they had supplied speakers on a number of occasions. The motion was welcomed by the Council.

"Pressurisation"

MR. R. CLITHEROW, Manchester, thought that, in view of the likely abolition of grammar schools in the near future, the word "grammar" should be dropped. MRS. E. B. WINDER spoke of the "pressurisation" of pupils in grammar schools, who were compelled to choose art or science at the age of thirteen or fourteen. She said that the Council should continue to approach schools as they were doing but should also "glamorise" pharmacy, as by a television programme.

MR. J. T. MEARNES, Bristol, asked for the Council to notify schools of pharmacy within a radius of 75 miles of any intended careers exhibition, as the local branch might not be up-to-date on the arrangements for modern pharmaceutical training. MR. C. STEELE, Hull, asked whether any such propaganda was necessary. The ideal was surely fewer pharmacists better employed. If pharmacy were made worth while there would be no need to glamourise it. His view was that the careers literature was excellent and sufficient.

Voting on the amendment was 92 for to 69 against. The amended resolution was also carried as a substantive motion.

The next motion was by Reigate, Redhill and District Branch:—

THAT it is the opinion of this meeting that a 16-mm. film be made on pharmacy as a career and that copies of the film be made available to branches for career exhibitions and similar functions, the existence of this film being made known to careers teachers.

The mover was DR. J. N. CARRINGTON, who said that films made more impact than lectures. All requisite information could be put over in about eighteen minutes. Educational requirements should be put at the end of the film in case they underwent a subsequent change. To cover similar ground in lectures, several speakers would be needed. Nearly every school had a 16-mm. projector, and copies of 16-mm.

films could be made in 8 mm. What was suggested was a film in colour lasting 15-20 minutes whose cost would not be above £6,000. A manufacturer might be found willing to produce such a film.

An amendment by Colchester Branch to insert "8-mm. and" in front of "16-mm. films" was withdrawn in view of Dr. Carrington's mention of 8-mm. copies.

From the platform MR. ALLEN ALDINGTON said the Films Committee had considered producing such a film but the Council had been advised that a film on its own was of little value. An excellent film on similar lines, made three or four years ago by the Boots' organisation, was available to all. Another film prepared by amateurs at the Liverpool College of Pharmacy was also in preparation and would become available.

MR. S. F. WOODWARD, West Middlesex (a member of the Society's Films Committee), said that film was a complicated medium to use effectively in competition with television, etc. A good film must cost at least £5,000, and the problem was how to get it shown. He suggested that the word "considered" should replace the word "made" in the motion and that the matter should be referred for joint consideration by the Public Relations and Films Committees of the Council.

Amendment and motion were lost.

The third motion, put forward by Colchester and District Branch, was moved by MR. K. H. FREE. It was:—

THAT it is the opinion of this meeting that, in order to enable branches to give full consideration to important proposals by the Council, at least four months' preliminary notice of such proposals should be given before they are reconsidered by Council, this period of notice to exclude the months of June, July and August or to be extended beyond four months to seven months if those months are included.

Procedure "Frustrating"

MR. Free said the procedure in the past had been frustrating because, while statutory notice had been given, not enough time was left to arrange meetings, and there was the further difficulty of incorporating additional meetings in prearranged programmes. Timing in the summer was wrong, and it was noteworthy that two propositions put to branches during the summer months had been rejected, whereas a longer report on which due time had been allowed to branches for discussion had been accepted.

From the platform MR. F. W. ADAMS (secretary and registrar) said the Council appreciated that there should be time for discussion, but what was "adequate" was controversial. The motion as worded tied down the Council to a unduly hampering time-table, and would not in practice be acceptable. To predict the "right" time for discussion was impossible. In his experience the Council had always been "too

early or too late." The meeting could rely on the Council to consider, in any future statements, the need for discussion. On that basis the motion was lost. Colchester Branch withdrew its next resolution (which sought a title change in the Pharmaceutical Society).

A resolution by Swansea and West Glamorgan Branch to exclude advertisements from the front cover of the *Pharmaceutical Journal* was lost after MR. W. J. TRISTRAM had indicated from the platform the expected loss of revenue and explained the technical difficulties of making the change.

Post-graduate Training

The next motion (number six in the list) was by Swansea and West Glamorgan Branch:—

THAT it is the opinion of this meeting that the former choice of pre-graduate or post-graduate practical training for students be restored.

MR. J. W. BURGESS, who moved it, said that the assistant secretary (Mr. D. F. Lewis) had told the British Pharmaceutical Students' Association at its annual meeting that post-graduate training had been introduced because the heads of schools preferred it. In his view school heads should not determine such a matter. It was even his own experience that many lecturers at schools of pharmacy preferred the pre-graduate man, who had a sense of vocation such as every pharmacist needed, as well as the compassion all practitioners of pharmacy must acquire. An amendment by Worcester City and County Branch called upon the Council to grant permission for pre-graduate studentship to commence if the student had two A level passes in the required subjects and for post-graduate practical training to commence if the student had been referred in one subject.

MR. ADAMS, from the platform, said that those who advocated practical training before the academic course were basing their views on something that had passed away. Modern changes had reversed the rôles of academic and practical training, the function of practical training being now to apply the theory learnt during the college course. The Worcester amendment was based on what had been a temporary concession from the general principle made to students who had embarked on training under the old system, it was never intended that the system should be regarded as normal. The Council asked for motion and amendment to be rejected.

MR. J. R. PHILIPS, Bournemouth, "speaking as a convert," said that certain things were needed in the mind of a young pharmacist, but he believed the other arguments put forward by Mr. Adams outweighed those considerations. Colleges should, however, reassess the first year of the college course so as to create in the student the state of mind required.

Amendment and motion were both lost.

MR. R. C. JOHNS next moved the Cornish Branch resolution:—

THAT it is the opinion of this meeting that the present requirements for practical training are inadequate preparation for registration as a pharmaceutical chemist.

His branch was not against the academic side of the present course but

felt that the pharmacist currently turned out from the colleges was incapable of running a business. Practical training should cover all aspects. Seconding the motion, MR. G. J. HENDRA said the pre-graduate system in the old days had produced worthy leaders in pharmacy. The new methods produced people still needing experience.

Defending the "academics" MR. MEARNs, Bristol, accused the opening speakers of being out of touch with present pharmaceutical education. The diploma courses had been altered recently in ways that members could and should find out about. In the third year at Bristol for example, instruction was given in business management and general practice, and lectures on philosophy, civics, etc., were included in the course. Replying, as proposer, MR. JOHNS said that, Bristol might be active but other colleges were not, and it was wrong that any student should be released from college "to lose all his own money or that of his employer."

From the platform MR. ADAMS said the subject had been dealt with by a special subcommittee on the Council, which had realised that the position was not satisfactory. The grounds of practical training had been widened in order to allow more people to register who otherwise might not trouble to join the Society. That had raised the problem of admitting into general practice somebody who had no knowledge of its practical aspects, and the Council was considering a change in the law to require practical work in a pharmacy for at least twelve months before management could be undertaken.

Tellers Needed

For the voting on the motion the tellers were put on, and the outcome was a majority in favour.

The next resolution, by West Metropolitan Branch, was put by MR. A. C. KENNETT in the terms:—

THAT it is the opinion of this meeting that it regrets the Council has failed to proceed with the draft proposed scheme for a closer liaison with the branches, and expresses the hope that the Council will put forward an amended scheme at an early date for consideration and comments by the branches.

Mr. Kennett said the reasons for putting the motion dated back to the 1962 Branch Representatives' meeting, at which two schemes had been discussed. A statement on the Society's finances in April 1964 had suggested improvements in the branch system and an increased transmission of information to branch secretaries. Those proposals had been delayed by lack of funds. At a branch secretaries' meeting in 1964 not only had no mention been made of the scheme, but no explanation had been given of the silence. His branch had written to ask why, and had received the reply that the proposals were not shelved, but that finance and other projected reorganisations were involved. "Shortly" had now extended into May 1965, and in his view it was essential to keep branches better briefed: Casual mention of a subject once a year was not enough. "Apathy," concluded Mr. Kennett, "is not always where you find it; sometimes it is where you put it."

Seconding the motion, MR. G. R. BATTYE said that in recent years the Council had been more aloof than previously. That had thrown more work on Council members in addressing branches, who could not be expected to be the sole link between headquarters and branches. Nor was the Society's journal quite adequate for the purpose. And were members satisfied that the Branch Representatives' meeting was the best liaison?

Congratulating the proposers on their presentation of the motion, MR. ALLEN ALDINGTON said that they had not, however, been quite factual. The Council agreed with what lay behind the motion, but was not happy with the scheme it had previously put forward, which had, therefore, been dropped. It was thought unwise to make a hasty decision, as the object was surely to produce a scheme that would stand the test of time. Recent moves had been slow, but the scheme would come up again this year, perhaps before the next branch secretaries' meeting.

MR. J. R. PHILIPS, Bournemouth, wanted to see the motion defeated. It was the duty of branches, not a function of the Council, to provide the ideas.

The motion was carried.

"A Mockery"

Two amendments were tabled to a motion by Bradford Branch calling for control of the distribution of samples to the medical profession by unqualified persons. One amendment—by Hastings Branch—to insert the words "containing scheduled poisons" was accepted by the movers. The other, by Folkestone, to delete "by unqualified persons" was carried, making the substantive resolution as finally adopted read:—

THAT it is the opinion of this meeting that the Pharmaceutical Society should press for the control of the distribution of samples containing scheduled poisons to the medical profession.

Proposing the motion, MR. E. C. MAUDE, Bradford, said that much medical representation was a mockery of the pharmaceutical qualification. Medical practitioners "lapped up" samples that were often potentially dangerous and "sampling" might usurp the dispensing rights of pharmacists. MR. W. W. HUDSON, Bradford, seconding, said the controls envisaged were similar to those governing the retail sale of products containing poisons. MR. R. H. KEMP, Hastings, thought the control should apply to all distributed samples, whether personal or postal. The Branch felt, too, that to restrict representation to pharmacists would cause too great a drain on pharmaceutical man-power. MRS. S. TURNER, who put the Folkestone amendment, said that the distribution of samples had got completely out of hand. New drugs underwent clinical trials, so there was no need of sampling.

MR. J. B. GROSSET, from the platform, said that medical representation had been under consideration by the Council's Practice and Law Committees. The point raised was really for the Association of British Pharmaceutical Industry to consider under its excel-

lent code of practice. The view of the Council was that the code should take account of S4B drugs, and that no sample should be larger than the smallest standard size issued by a manufacturer. It should be stamped "specimen" and reserved for professional use.

Folkestone Branch failed to carry a motion, put by MR. SLOPER, calling for the name of a product, if disclosed on the label of a dispensed medicine, to be given "as dispensed."

Area Representation

MR. P. M. WORLING proposed a motion by Reading Branch:—

THAT it is the opinion of this meeting that as the reasons for rejecting area representation were formulated some years ago it is time that the Society's Council made a fresh appraisal of the situation.

He said there was a great need to stimulate interest in Council activities, and that area representation would remove the "remoteness" of the Council.

MR. J. H. VERRALL, Medway, said he had always been led to believe that territorial representation had been "disposed of" by the Society's officials. If that were so they must accept blame for members' apathy. The disadvantage charged against territorial representation was that it did not produce the best men. But it was not necessary that a Council member should represent the area in which he was resident.

MR. R. H. KEMP said that territorial representation would not secure adequate representation for all sections. A solution might be to have a section of the Council elected on a territorial basis, the remainder on a wider basis.

MRS. E. B. WINDER asked how T.R. was to be interpreted. On acreage? On population? On density of pharmacies? The system would be unfair to rural branches, and voting was best left as at present. Her own method was to vote for "one old and tried member of Committee, one woman pharmacist, one old and one young proprietor, one hospital pharmacist, one medical representative and one pharmacist from as far away as possible."

The vote went in favour of the motion by 114 votes to 96.

North Staffordshire Branch withdrew motion twelve on the order paper (proposing territorial representation). The subject of electoral methods, however, was not finished with. MR. J. T. MEARNS, for Bristol Branch, moved:—

THAT it is the opinion of this meeting that members of Council be elected by means of a single transferable vote. He pointed out that, by present methods, Council members were returned by a minority of votes. The method advocated would give every member a full choice, eliminate "part" voting and give an 80 per cent. opinion of the electorate. It was simple, would show the strength of a group, and would eliminate "gambolling." At least, if the motion were passed, the Council would be forced to "do its homework" on the subject. MR. D. F. BALDWIN, seconding, described the method as mathematically

sound and mechanically simple: Every elector would have a greater say and every Council member a better estimate of the weight of his vote.

MRS. S. T. DICKENSON, Nottingham, saw snags in the method. If a candidate had X votes more than the required number of votes for election, then X papers were selected at random and their other votes used towards other candidates according to preference. If her voting paper were not in that random selection it seemed she was losing her other six votes.

MR. J. J. LEONARD, Exeter, said the system operated excellently in the national elections in Ireland, and he congratulated Bristol Branch on its perspicacity in putting it forward.

MR. R. C. WILBERFORCE, Wallasey, wondered whether the results of the 1965 Council election would have been any different by the method described. The present system was easy, and to ask electors for seven degrees of voting would probably result in a lower poll. In his view the simple device of increasing the number of elected members from the present twenty-one would go a long way to solve problems of inadequate sectional representation.

MR. J. H. VERRALL, Medway, thought the single transferable vote might be marginally better than the present system but it still involved voting for people one did not know and still left no contact with branches.

MR. MEARNS, replying as mover, said the results by the two methods could only be compared in a controlled experiment, but at least the members would have been returned on a majority vote. Experience had shown that voting papers increased under the single transferable vote.

The motion was carried.

The next motion, put by Leeds Branch, was:—

Voting by Proxy?

THAT voting by proxy should be allowed at special general meetings of the Society.

Proposing it, MR. D. ROYCE pointed to the "different atmospheres" of the annual and Branch Representatives' meetings. In the past there had been instances where an annual meeting had overwhelmingly voted for a motion and at the Branch Representatives meeting next day a similar motion had been rejected equally forcibly. Where a special general meeting was called to discuss an important resolution it was reasonable and logical for a proxy vote to apply. MR. M. GORDON, seconding, said members might be less apathetic if they thought that they could register a vote. MR. G. M. FOX, Harrow, agreed. Each member of the Council, he said, had been elected on a minority vote. It was right that, where a motion affected 80-90 per cent. of the membership, all should have an opportunity to vote. MR. A. KING, Finchley, supporting, referred to the previous night's annual meeting at which, he said, there had attended "a highly organised number of members" who had been "brought by coaches, primed by their company's legal department, and had speeches prepared

for them." He also claimed that when the vote was taken, some were seen to be holding up both hands. That showed how irrational the present method was. MR. C. G. MURRAY, Dudley, believed on the other hand that the proposed change would be "fraught with danger from the beginning": It might have helped "the thoughtless sheep brought here last night." Only 40 per cent. of the 29,000 members were, he said, interested in voting.

MESSRS. C. MELLOR, Stockport, and M. LIGHTFOOT, East Cumberland, argued that voting should be through the branches.

The motion was carried.

Society and Central N.H.S. Committee

An amendment in the names of Birkenhead, Bournemouth, Liverpool and Wallasey to the next motion, tabled by Leeds Branch, having been carried, the substantive motion then read:—

THAT the Pharmaceutical Society, the Executive of the National Pharmaceutical Union and the Central N.H.S. (Chemist Contractors) Committee should discuss the permanent representation of two members of the Council on the Central N.H.S. (Chemist Contractors) Committee.

Speaking against the original motion MR. C. H. ROBINSON, Mansfield, Derbys, said it had been directed to the wrong people at the wrong meeting. It should have been put to the National Pharmaceutical Union which, if it wanted the Society on the Committee, could "decide the issue tomorrow."

MR. K. W. YOUNGS, Somerset County, asked the platform for guidance on who could be officially on the Committee. MR. ADAMS said there was nothing to prevent the Society being represented on the body, and the Council had made it clear that it was willing to have members serve on the Committee.

There were four amendments to Coventry's motion on the formation of group pharmacies, the first by Hastings and three by Liverpool. That from Hastings, which asked for the Society to encourage but not to promote group pharmacies, was carried. So also were the first two by Liverpool which had the effect of deleting from the original motion (1) a reason for the formation of group pharmacies (to give adequate leisure time for pharmacies) and (2) the description "smaller" pharmacies. The amended motion, which was passed, read:—

THAT the Council should encourage the formation of group pharmacies employing two or more pharmacists, by the amalgamation of pharmacies.

The third amendment for Liverpool was withdrawn at the suggestion of MR. ADAMS, who said that if it were incorporated the effect would be to delay action on the main resolution. MR. R. CLITHEROW thought that, judging by the number of pharmacists who would not join in a rota system, many pharmacists did not care about leisure.

Motions 17 and 19 being similar in content, it was proposed by MR. F. MELROSE, Fife, and agreed by the representatives, that they should be taken

together. The "married" resolutions then read:

THAT the Council of the Society should seek powers to regulate the location of new pharmacies and take steps to ensure that there will be an equitable distribution of pharmacies throughout the country.

Planned Service

Proposing the amended resolution, Mr. Melrose said that a planned service was necessary. With the present man-power situation the pattern of pharmacy was not likely to change, and in redevelopment areas only the multiples could afford to take shops. In the rural areas some form of subsidy might be called for. MR. ADAMS said that a start had been made on a planned pharmaceutical service. A "doomsday" book was being compiled giving such information as population, transport facilities, etc. Collecting the information would be a long and expensive operation, but if the motion were carried the Council would be encouraged to go ahead. The combined motion was carried.

Motion 18, in the name of Nottingham, was:—

THAT the Council of the Society seek powers to control the registration of pharmacies.

During debate on the motion THE CHAIRMAN intervened to say that the sentiments expressed in it were part of Council policy. The motion was carried.

It was proposed and agreed to refer to Council the Dudley, Stourbridge and District motion:—

THAT the Society should put forward proposals for the shortening of the pharmaceutical working week, bearing in mind the one-man pharmacy.

The meeting acceded to MR. C. E. TURNER's request to withdraw a motion in the name of North Staffordshire that sought to empower the Council to refuse registration of premises that would lower pharmacy's prestige and status.

A Birmingham Branch motion, proposed by MR. M. H. JEPSON, which called for registration for two years, before permanent managerial duties could be undertaken by any member, was lost.

MR. G. L. WALTON, North Staffs, moving the next proposition, said that he was willing to accept amendments standing in the names of Birkenhead, Liverpool and Wallasey Branches, and of Romford Branch to the motion submitted by his branch, which as amended, read:—

THAT the Society should press more vigorously for the implementation of the recommendation of the Society to the Interdepartmental Working Party on Legislation Concerning Medicines, that the preparation and distribution of medicines should be in the hands of pharmacists.

The motion was carried.

As the time had almost expired, and only one further motion could be taken, it was agreed to proceed to motion 26, submitted by Folkestone:—

THAT the Council should, by advice and direction, make a more serious attempt to eliminate the causes of disunity in general practice.

MRS. S. TURNER, Folkestone, in proposing the motion, instanced the Council's statement on phenacetin (*C. & D.*, March 6, p. 225) on which more direct notice should have been given.

The motion was carried.

PHARMACY AND PLASTIC SURGERY

Address to Plymouth Branch of the Pharmaceutical Society

AN illustrated lecture on "Pharmacy in a Plastic Surgery Hospital" was given by MR. F. SUMMERS (superintendent pharmacist, East Grinstead Plastic Surgery Hospital) at a meeting of the Plymouth Branch of the Pharmaceutical Society recently. Mr. Summers said there was much misconception about plastic surgery. Many people thought it was merely transfer of skin, but it was better expressed by the American term reconstructive surgery. If all other types of surgery were considered as "demolition," plastic surgery was a building-up process, which could involve many operations and often a great length of time.

With removal of the oesophagus in carcinoma, for example, it was necessary to create a new one using cartilage tissue so that the mouth came back into use again and the patient no longer needed to be fed through a hole in the throat. Plastic surgery was not new. Gasporis Taliascoti had given a treatise on grafting in 1597, describing the transplantation of growing tissue from an arm to the nasal orifices to create a new nose. Mr. Summers described a new burns treatment unit at his hospital, not yet officially opened, and claimed the finest in the world. Its rooms were maintained sterile by air locks, etc., persons entering having to change all clothes, have a shower, and put on sterile clothing. The patient could speak to visitors outside a double window by amplifier and in case of need could press a button which emitted a "bleep signal." If that was not answered within two minutes it was automatically broadcast over the building. A sister at the central desk could record the temperature of any patient simply by pressing a switch.

The apparatus was the latest devised and included a new infra-red scanning unit that built up a heat picture of the patient, emphasising the depth of third degree burns (ordinarily more difficult to assess). Such a burn impaired blood supply to the injured part, making the temperature lower than in other parts of the body. Treatment of burns and scalds was subject to fashion. The popular current treatment was exposed. When hundreds of people in the late nineteenth century were badly scalded on the Mississippi steamboat on which the boiler had burst, those people to whom no dressing had been applied were found to heal better and more quickly than the rest. That had been forgotten until the Korean War, when it was rediscovered. In the revived method the area was exposed then sterile antibiotic dusting powder applied, which absorbed the serious discharge formed as exudate and relieved pain. Mr. Summers explained the processes he used in sterilising such powders. In first degree burns the epithelial

The remaining five motions on the agenda were referred to Council, it being time to hold the adjourned annual meeting. A vote of thanks to the chairman was moved by MR. CLITHE-ROW.

proliferating layer was not damaged and healing followed. In third degrees the layer was damaged or destroyed and grafting was necessary. Small-area burns could be covered with skin grafts removed from other parts of the body, usually the thigh, but that could not be done with large areas, and a technique known as "postage stamp" grafting was used. It involved placing small pieces of graft skin in areas in which they grew and eventually linked up. It was not pretty but it was effective. In some cases, particularly of infants with extensive burns, a mother could donate skin as a temporary cover, but it would eventually slough off.

Dealing with the problems arising with homografts, autografts and heterografts, he said that skin or vascular tissue could not be grafted from one person to another: cartilage, bone or cornea could. At East Grinstead a research unit to deal with those problems had been established, and some remarkable discoveries had been made. For corneal grafts there were still insufficient eyes available for grafting or research. Much research had been done on keeping eyes in an "eye bank," and deep-freeze procedures had proved successful. The eye was frozen at one degree per minute down to -40°C and then quickly to -79°C . By that process it remained viable.

EXPANSION PLANS

ABOUT £4 millions is being spent by Imperial Chemical Industries, Ltd., on a new plant for the manufacture of basic dyes at the Huddersfield works of the company's dyestuffs division.

THE Distillers Co., Ltd., chemicals and plastics group have signed a five-year contract with a shipping line for the carriage of acids to Continental destinations from their new acid plant at Hull which is due to start operating in the latter half of 1966.

MARCHON Products, Ltd., and Solway Chemicals, Ltd. (members of the Albright & Wilson group), are about to commence the construction of a fourth and fifth kiln at Whitehaven, which will almost double the present sulphuric acid and cement capacity of 200,000 tons annually of each product. The new capacity will become available in 1967.

FARBWERKE Hoechst, A.G., are constructing a plant at Seoul, South Korea for the production of Haemaccel blood plasma. The new plant will cost about DM1 million, and is expected to come into production towards the end of the year. It will form part of the Korean Han-Dok Remedia Industrial Co., Ltd., in which Messrs. Hoechst will acquire a share. The company has distributed Hoechst pharmaceuticals for many years. The new plant will be the first pharmaceutical plant to be erected in Korea with German backing.

EXPERIMENTS ON ANIMALS

Stricter controls recommended

THE accepted principles governing the use of living animals for scientific research demand no change, but stricter supervision should be imposed over the granting of licences and the day-to-day control of experiments. That conclusion is reached in the report of the Departmental Committee on Experiments on Animals (Her Majesty's Stationery Office, price 16s.).

The report says that present legislation (the Cruelty to Animals Act, 1876) "has been generally effective, but in recent years its provisions have not matched up to scientific and technological requirements or its administration to recent scientific advances." Eighty-three recommendations designed to extend the scope of existing legislation and to tighten up the controls are recommended.

The Committee found both in opponents of animal experiments and in those who regard them as essential and socially valuable a recognition that anyone using an animal in research is under a moral responsibility to justify his action and a duty to avoid or limit pain and give proper care. From studies of evidence given about unnecessary experiments and the complexity of biological science the Committee found it impossible to tell what practical applications any new discovery in biological knowledge might have later for the benefit of man or animal. "Accordingly we recommend that there should be no general barrier to the use of animal experimentation in seeking new biological knowledge, even if it cannot be shown to be of immediate or foreseeable value." Another recommendation is that all animals in laboratories, whether used for experiments or for other scientific purposes, should be protected against "severe pain that endures, discomfort that is likely to endure and avoidable pain of any kind." The Act should be amended to apply to any experimental procedure liable to cause stress or interference with, or departure from, an animal's normal condition of well-being (at present it covers only experiments "calculated to give pain").

The report also recommends that no simple inoculation or superficial veno-operative procedure "more severe than section" should be permissible in any experiment without anaesthesia of the animal involved. Curariform drugs should not be used except in conjunction with anaesthesia of sufficient depth to produce loss of consciousness. Anaesthetics should be given by trained staff and more attention should be paid to the use of analgesics.

Breeding

The breeding of animals for research is recommended to be brought under statutory control, the Home Secretary to be empowered, subject to consultation with the interests concerned, to prohibit the use in laboratories of animals not bred for the purpose in registered laboratories or breeding units outside laboratories.

A scheme should be considered for controlling the collection of unwanted dogs and cats direct from persons breeding such animals for non-laboratory purposes, collectors being required to be "approved" for such activities, to hold a licence, and to be subject to Home Office inspection.

Emphasis is laid on the need for veterinary supervision and the contribution that veterinary science can make to the operation of animal laboratories, and it is recommended that the Home Secretary should have power to make regulations governing the care, accommodation and transport of laboratory animals and issue an interim code of standards.

Inspection

The inspectorate should be increased in number from eight to twenty-one, and the licensing provisions require drastic revision. A new system of probationary licensing is suggested, with sponsorship by persons likely to have close knowledge of applicants and their work. After reviewing the main categories of use to which laboratory animals are put the report recommends a new pattern of control according to the qualifications of licensees, the pain likely to be caused, and the purposes for which animals are used. It stresses that the present law is inadequate to regulate experiments that, beginning with a trivial procedure, may lead to severe pain and suffering. Though the reports reject proposals for arbitrarily limiting the numbers of animals used, it recommends that inspectors should be given particulars of all projects and should approve beforehand those in which pain is considered likely to arise.

Reconstitution of the Advisory Com-

mittee to include lay persons is recommended. It should advise on general matters of policy as well as on proposed experiments of a novel or controversial character and on suggestions for new biological tests under the law relating to therapeutic substances. Its members should be empowered on their own initiative to advise on matters relevant to the usage and care of laboratory animals, and should make an annual report on their own activities. The Committee record their belief that the "objects of the law would be better served if the facts were more readily ascertainable," and suggest a more informative annual report by the Home Office. Many of the proposals would require new legislation. Those that do not could be introduced in advance of legislation, but the Committee recommend that, except for reinforcing the inspectorate and reconstituting the Advisory Committee, they should not. "Existing forms of control are so well established that piecemeal changes would serve only to complicate the introduction of statutory provisions and cause general confusion among licensees and the public."

Evidence on supply of laboratory animals is reported as showing a steady movement away from casual purchase towards systematic breeding by laboratories and commercial producers; anxiety among scientific organisations about the supply of cats and dogs; and concern among welfare organisations and the public about illegal traffic in pets.

The Departmental Committee was set up by the Home Secretary on May 23, 1963, under the chairmanship of Sir Sidney Littlewood, "to consider the present control over experiments on living animals and to consider whether any, and if so what, changes are desirable in the law or its administration." Sir Hugh Linstead was a member of the Committee.

Correspondence

Letters when received must bear the name and address of the sender, not necessarily for publication. The Editor does not hold himself responsible for the views expressed.

Gilbertian

SIR,—Your leading article "Financial Interest—at what Stage?" raises doubts as to the ability of any local Council to transact any business at all. If all the members are ratepayers, then each and every one has a financial interest in any council business that could affect the rates. With ever-increasing rates I cannot see such interest being considered "insignificant." I wonder if the local council might be in trouble for turning down a scheme because it would put up the rates? I feel sure W. S. Gilbert would have enjoyed this sort of situation.

F. SMITHSON,
Preston, Lancs

Unexpected Windfall

SIR,—Recently we had a prescription for 180 tabs Corosedine, which is not usually prescribed in this neighbourhood. I had to obtain it from the wholesaler. I ordered the nearest quantity to 180, and received 1 x 250, which I duly endorsed on the prescription form,

adding a claim for the whole 250 tablets, it being unlikely that I should get a further script for them. Yesterday I received a note from the pricing bureau as follows:—

I REFER to your claim for 250 pack tabs Corosedine against an order for 180 tablets . . . and regret that as 6 x 30 packs could have been used, I am unable to pass your claim for payment.

It is interesting to note that the total cost price of 250 tabs which I claimed is 15s. 1d. and the 6 x 30 which they insist that I get paid for and should have used is 19s. I am glad I worked it out, as I was just about to write to the bureau telling them what I thought about them. But why should I? They constantly write to tell that I use too small a size of this or that!

AROMATICUS

POSER SOLUTION

THE prescription shown last week was for:—

Liq. Picis Carb. 3 iii. Dr. ii in 1 pt. hot H₂O.

TRADE REPORT

The prices given are those obtained by importers, or manufacturers for bulk quantities or original packages. Various charges have to be added whereby values are in many instances augmented before wholesale dealers receive the goods into stock. Crude drugs and essential oils vary greatly in quality and higher prices are charged for selected qualities.

LONDON, MAY 26: Few price movements were recorded during the week and markets remained in the doldrums.

Among CRUDE DRUGS, a scarcity of several commodities was apparent. There were no offers of BUCHU from origin and spot supplies were cleared. PERU BALSAM was unobtainable for immediate delivery although there were shipment offers. IPECACUANHA prices continued to ease, particularly those of the Colombian variety. Moroccan CUMIN SEED for shipment added another 20s. per cwt. to the previous week's increased price. Among SPICES, Jamaican GINGER was 10s. per cwt. dearer on the spot; PEPPERS were also mostly firmer but TURMERIC fell by 10s. for shipment. BELLADONNA LEAVES were again on offer after an absence of several months. MENTHOL was steady at recent levels.

In ESSENTIAL OILS, Chinese PEPPERMINT was threepence per lb. lower for shipment, while Brazilian oil was reduced by the same margin in both positions. Mysore SANDALWOOD offers have not been available recently but so far East Indian quotations have not been affected. Chinese ANISE was reduced by fourpence-halfpenny on the spot.

Pharmaceutical Chemicals

Where material is of foreign origin prices below may be subject to import surcharge.

ACETANILIDE. — Crystals, one-cwt. lots, 2s. 10d. per lb.; 5-cwt., 2s. 9d.

ADRENALINE. — (Per gm.). Synthetic B.P., 1-kilo lots, 11d.; 500 gm., 1s. 1d. ACID TARTRATE, B.P., 1 kilo, 7½d.; 500 gm., 9d.

ALOIN. — Micro-crystalline, 14-lb. lots, 34s. per lb.

ALUMINIUM CHLORIDE. — Pure, in 50-kilo kegs, 6s. 1d. per kilo.

AMINACRINE. — HYDROCHLORIDE, B.P., is £24 per kilo.

ANTIMONY SALTS. — CHLORIDE, SOL., B.P.C., 1934, carboys, 5s. 7d. per kilo; FLAKE, 14s. 4d. kilo.

ATROPINE. — Per oz. for 16-oz. lots; ALKALOID and METHONITRATE, 39s.; METHYLBROMIDE, 38s. 6d.; SULPHATE, 34s. (1.181s. for 1-kilo).

BACITRACIN. — Sterile topical is 53s. per mega unit for 25 m.u.

BEMEGRIDE. — B.P.C. is 320s. per kilo.

BENZOCAINE. — B.P. is 13s. 3d. per lb. in 1-cwt. lots.

BISMUTH SALTS. — Prices (per kilo):

Quantity	Under 50	50	250
	s. d.	s. d.	s. d.
CARBONATE ...	62 10	61 0	60 0
SALICYLATE ...	60 10	59 0	—
SUBGALLATE ...	56 10	55 0	—
SUBNITRATE ...	57 10	56 0	55 0

CAFFEINE. — Hydrate in 50-kilo lots and over, 28s. 1d. per kilo; CITRATE, 20s. 11d.

CHLORPHENESIN. — 50-kilo lots are 72s. 6d. per kilo.

CINCHOCAINE. — HYDROCHLORIDE, B.P., is 975s. per kilo.

DIOENOSTROL. — B.P. is 1s. per gm. for 5-kilo lots.

DITHRANOL. — B.P. offered at 6s. 9d. per oz. for 7-lb. lots.

DOMIPHEN BROMIDE. — B.P.C. grade, 32s. per lb. in 1-cwt. lots.

GLUCOSE. — MONOHYDRATE, B.P., powder, 77s. per cwt., delivered in 1-ton lots; ANHYDROUS, 134s. LIQUID, in drums; 56s. per cwt. for 5-drum lots.

GLYCERIN. — Chemically pure B.P.: —

	Over 25 tons	5 tons and under 25 tons	1 ton and under 5 tons	Under 1 ton
	s. d.	s. d.	s. d.	s. d.
TANK WAGONS				
10-14 tons	176 0	—	—	—
5-10 tons	177 6	179 6	—	—
DRUMS				
5 cwt.	180 0	182 0	185 0	191 0
2½ cwt.	182 6	184 6	187 6	193 6
TINS				
56 lb.	184 0	186 0	189 0	195 0
28 lb.	205 0	207 0	212 0	220 6
14 lb.	211 0	213 0	218 0	226 6

Minimum delivery 1-cwt. Drums charged and returnable. Minimum terms for technical grade glycerin s.g. 1.2627 are 171s. per cwt. for lots of over 25 tons in bulk deliveries of 10-14 tons.

GUAIACOLS. — LIQUID B.P.C., 16s. per lb. for 1-cwt. lots; CRYSTALS, 15s. 9d.; CARBONATE, 18s.

HEXAMINE. — B.P., 1s. 6d. per lb. for 1-ton lots, delivered in 1-cwt. bags. Technical is 1s. 5d. per lb.

HEXAMINE MANDELATE. — 50-kilo lots, 27s. per kilo; 1,000 kilos, 23s. 6d.

INOSITOL. — One-kilo, 100s.; 10 kilos, 90s. per kilo.

ISOPRENALINE SULPHATE. — One kilo lots, 445s. per kilo; 5-kilos, 430s. per kilo.

KAOLIN. — Light, 500 kilos, 1s. 2d. per kilo and 1,000 kilos, 1s. 1½d.

LEAD ACETATE. — B.P. crystals, 4s. 5d. per kilo.

METHYL TESTOSTERONE. — Per kilo, £95.

PHENACETIN. — B.P. one-ton lots, 6s. 3d. per lb.; 1-cwt., 6s. 9d.

QUINIDINE. — SULPHATE, 1,413s. 3d. per 100-oz. for lots of 500-oz. and over; less than 500-oz. are 1,437s. 9d. per 100-oz.

QUININE. — 1,000-oz. lots: ALKALOID, 9s. 5d. per oz.; SULPHATE, B.P., 1963, 6s. 10d.; BISULPHATE, 6s. 9d.; DIHYDROCHLORIDE, 9s. 5d.; HYDROCHLORIDE, 9s. 1d.; HYDROBROMIDE, 8s. 3d.

SODIUM ACETATE. — B.P.C. 1949, 50-ki'os, 4s. 0½d. per kilo.

SODIUM BENZOATE. — One-ton lots, 2s. 7½d. per lb.; 1-cwt.; 1-cwt., 2s. 9½d.

SODIUM BICARBONATE. — B.P., 1-cwt. bags £19 3s. per ton for 8-ton lots.

SODIUM BROMATE. — 50-kilo lots, 12s. per kilo, 1,000 kilos, 9s. 6d. per kilo.

SODIUM CARBONATE. — (Per cwt.), B.P.C. exsiccated, 1-cwt., 90s.; 5-cwt., 85s.; 1-ton, 80s.

SODIUM CHLORIDE. — Vacuum dried, 172s. 9d. per ton in paper sacks for 6-ton lots, delivered London.

SODIUM CYCLAMATE. — Fifty-kilo lots offered at 13s. 6d. per kilo in free packages, delivered.

SODIUM FLUORIDE. — B.P.C., 1934, 50-kilo kegs, 8s. 7d. per kilo.

SODIUM HYDROXIDE. — FLAKE, £36 15s. per ton in 8-ton lots, STICKS, B.P., 50-kilos, 10s. 10d. per kilo in 5-kilo tin; PELLETS, 7s. 6d. kilo.

SODIUM METABISULPHITE. — B.P. grade £47 17s. 6d. per ton. Commercial grade less 10s. per ton.

SODIUM NITRATE. — B.P. 50-kilo kegs, 45s. 8d. per kilo.

SODIUM PERBORATE. — (Per ton), TETRA-

HYDRATE (minimum 10 per cent. available oxygen) £142 5s. in 1-cwt. kegs; £134 15s. in 1-cwt. bags; PERBORATE MONOHYDRATE (minimum 15 per cent. available oxygen) is £309 15s.

SODIUM PERCARBONATE. — (Per ton). £173 15s. in kegs (bags £7 10s. per ton lower) for minimum 12½ per cent. available oxygen.

SODIUM PHOSPHATE — B.P. crystals, 4s. 11d. per kilo; POWDER, 6s. 1d.

SODIUM SALICYLATE. — One-ton lots in bulk, 3s. 9d. per lb.; 5-cwt., 3s. 10d.; 1-cwt., 4s.

SODIUM SULPHATE. — B.P. from £16 per ton as to crystal. B.P. exsiccated about £66 per ton.

SODIUM SULPHITE. — Four-ton lots: Commercial crystals, £27 to £28 10s. as to container; photo. quality, £33 per ton in bags.

SODIUM THIOSULPHATE. — Photographic crystals in paper-lined bags, £36 per ton.

SULPHUR. — (Per ton). SUBLIMED FLOWERS, B.P., £60; TECHNICAL, £55; GROUND, £20 to £25; PRECIPITATED, B.P., £120; ROLL, £28 to £30. All ex store.

Ethyl Alcohol

BRITISH spirit (fermentation grades) per proof gall. —

ETHYL ALCOHOL: (95 per cent. Gay Lussac, 66 overproof): where the minimum delivery is 2,500 bulk gall. or over, 3s. 7d.; 1,500, 3s. 8d.; 500, 3s. 9d. Prices exclusive of duty and are for tank wagon lots.

ABSOLUTE ALCOHOL, 95.5 per cent., 74.5 o.p., from 3s. 11d. to 4s. 1d. for same quantities: the special high strength (99.9 per cent., 75.2 o.p.), from 4s. 3d. to 4s. 8d. (in drums) for 1,000-40 gall. lots. DOUBLY RECTIFIED ALCOHOL (S.V.R.), 95.8 per cent., 68 o.p., from 3s. 9d. to 3s. 11d. R.R. ABSOLUTE ALCOHOL (re-rectified), 99.7 per cent., 75 o.p., 8s. per proof-gall. net (for 40-gall. drums).

SYNTHETIC grades (supplied only to buyers authorised by Customs and Excise to buy duty free) 95 per cent., from 2s. 10d. to 3s. 0d.; 99.5 per cent., 3s. 1d. to 3s. 3d. bulk deliveries.

Methylated Spirit

METHYLATORS' rates per bulk gall. in Great Britain are as follows:

INDUSTRIAL METHYLATED SPIRIT: Strength 61 o.p., 500 gall. and over, 5s. 1d.; 100 gall. and under 500 gall., 5s. 6d.; 40 gall. and under 100 gall., 5s. 11½d.; 10 gall. and under 40 gall., 6s. 5½d.; 5 gall. and under 10 gall., 6s. 11½d. Strength 64 o.p., halfpenny per gall. more than the above rates: 66 o.p. (B.P.), one penny more: 68 o.p., 3½d. more with 74 o.p. at 5s. 10½d.; 6s. 3½d.; 6s. 9d.; 7s. 3d. and 7s. 9d. for similar quantities. Tank wagon delivery is 2d. per gall. off list price—minimum 500 gall. For industrial methylated spirit of perfumery grade, prices are from 6s. 6d. (tank wagon), for 500 gall. to 8s. 0½d. (10-gall. drums) for 64 o.p.

MINERALISED METHYLATED SPIRIT: Strength 64 o.p. in one delivery 500 gall. upwards, 5s. 5½d. in drums; 100 gall. and under 500 gall., 5s. 10½d.; 40 gall. and under 100 gall., 6s. 4d.

PYRIDINISED INDUSTRIAL METHYLATED SPIRIT: Strength 66 o.p., 500 gall. and over, tank wagon delivery, 5s. 3½d.; 500 gall. in 40-gall. drums, 5s. 5½d.; 100 gall. and under 500 gall. (in drums), 5s. 10½d.; 40 gall. and under 100 gall., 6s. 4d.; 10 gall. and under 40 gall., 6s. 10d.; 5 gall. and under 10 gall., 7s. 4d.

Crude Drugs

ACONITE. — Spot, Spanish, *napellus*, 2s. 4d. per lb.; shipment, 2s. 3d., c.i.f.

AGAR. — Kobé No. 1, 13s. per lb. in bond; shipment, 12s. 6d., c.i.f. Spanish, 15s. to 15s. 6d., duty paid.

ALOE. — Primes, 270s. per cwt. spot. Shipment, 265s., c.i.f. Curaçao, spot, 265s.; 260s., c.i.f.

ANISE. — Chinese STAR, 152s. 6d. per cwt. spot, duty paid; f.a.q. for shipment, 115s., c.i.f.

ANNATTO. — Madras f.a.q. seed, spot, 300s. per cwt.; no shipment offers.

ARROWROOT. — St. Vincent from 1s. 3d. to 1s. 6d., as to grade.

BALSAMS. — Per lb.: CANADA: 24s. 6d., c.i.f. COPAIBA: B.P.C. 11s. 6d. PERU: 23s., spot, nominal; shipment, 21s., c.i.f. TOLU: B.P., from 10s. 6d. to 27s. 6d.

BAY. — LEAVES, 1s. 9d. per lb., spot.

BELLADONNA. — LEAVES, 5s. 6d. per lb., spot. ROOT, 1s. 8d. per lb., spot; shipment, 1s. 7d., c.i.f.

BENZON. — Sumatra block spot from £20 to £40 per cwt. as to quality.

BUCHU. — Shipment nominal; spot, cleared.

CALAMUS. — ROOT, 100s. per cwt., spot, 87s. 6d., c.i.f.

CAMPHOR. — B.P. powder for shipment, 5s. 8d. per lb., c.i.f.; spot, 7s.

CARDAMOMS. — Aleppy greens, spot, 17s. 9d. per lb.; shipment, 19s. 6d., c.i.f.

CASCARA. — Spot, 225s. per cwt.; shipment, 218s., c.i.f.

CASSIA. — *Fistula*, 105s. per cwt. spot; *lignea*, whole shipment 202s. 6d., c.i.f.; selected broken, 192s. 6d., c.i.f.

CHAMOMILE. — Belgian flowers scarce at from 20s. per lb., upwards spot; German type, 7s. 6d.

CHERRY BARK. — Thin natural, 2s. 2d. per lb., shipment, 2s., c.i.f.

CHILLIES. — Zanzibar, spot, 315s. per cwt. Mombasa, spot, 250s., nominal.

CLOVES. — Zanzibar, spot, 2s. 10½d. per lb. standard grade; shipment, 2s. 7½d., c.i.f.

COCHINEAL. — Canary Isle silver-grey, 21s. per lb.; black brilliant, 25s. Peruvian silver-grey, 17s. landed terms.

COCILLANA. — Bark 1s. 6d. per lb. on the spot.

DIGITALIS. — *Purpurea* leaves, 2s. 6d. per lb.

ELEM. — Spot, 1s. 8d. per lb.; shipment: new crop, 1s. 5d., c.i.f.

ERGOT. — Portuguese, spot, 9s. 9d. per lb.; shipment, 9s. 6d., c.i.f.

GENTIAN. — Root, 190s. per cwt. spot; shipment, 185s., c.i.f.

GINGER. — (Per cwt.) Nigerian, June-July shipment (c.i.f.), split, 105s.; peeled, 210s. African, spot, 265s. per cwt.; shipment, May-June, 230s., c.i.f. Jamaican No. 3, spot, 370s.; shipment, 340s., c.i.f. Cochín, spot, 300s., May-June shipment, 315s., c.i.f.

GUM ACACIA. — Kordofan cleaned sorts, 165s. per cwt. spot; shipment, 147s., c.i.f.

HONEY. — (Per cwt.). Australian light amber, spot, 115s. to 120s.; and medium amber, 110s. to 115s.; Argentine, 110s. to 115s.; Canadian, 175s. to 180s.; Mexican spot, 115s. to 120s.

IPECACUANHA. — Matto Grosso for shipment, 55s. per lb., c.i.f. and spot, 60s. Colombian, 54s., c.i.f.; spot, 60s. Costa Rican, 72s., c.i.f. and 75s., spot.

KARAYA. — No. 1 f.a.q. gum, spot, 415s.; No. 2, 300s. per cwt.

KOLA NUTS. — African, spot, 6½d. per lb., nominal; shipment, 5½d., c.i.f.

LANOLIN. — ANHYDROUS B.P., is from 2s. 6d. to 2s. 10d. per lb. in 1-ton lots delivered free drums. Commercial grades from 1s. 9½d.

LEMON PEEL. — Spot, 1s. 9d. per lb.; partially extracted, 1s.

LINSEED. — Whole, 72s. 6d. per cwt.; crushed, 110s.

LIQUORICE. — Natural root: Russian, 67s. 6d. per cwt.; Anatolian, 57s. 6d.; Anatolian decorticated, 170s. Block juice: Anatolian, 210s. to 220s. per cwt. Italian stick from 395s. to 460s. per cwt.

LOBELIA. — Dutch on the spot offered at 6s. 6d. per lb.

MACE. — Whole pale blade, 14s. per lb. for forward delivery.

MENTHOL. — (Per lb.). Chinese for shipment, 29s. 6d., c.i.f.; spot, 30s. 6d., in bond. Brazilian for shipment, 31s. 6d., c.i.f.; spot, 34s. 6d., duty paid and 31s. in bond.

MERCURY. — Spot nominally £205 per flask of 76-lb. ex warehouse.

NUTMEGS. — (Per lb.). West Indian, spot, 110s., 7s. 6d.; sound unassorted, 7s.; defectives, 5s. 6d. East Indian for shipment, 80s., 8s. 4½d.; 110s., 6s. 11d., b.w.p. 4s. 4½d., c.i.f.

NUX VOMICA. — Cochín, 80s. per cwt. on the spot; shipment, 65s., c.i.f.

ORANGE PEEL. — Spot: Sweet ribbon, 1s. 8d. per lb., bitter quarters: West Indian, 10½d.; Spanish, 1s. 9d.

PEPPER. — White Sarawak spot from 3s. 1½d. to 3s. 3d. per lb.; shipment, 3s., c.i.f. Black Sarawak spot nominally 3s. 2d. Prompt shipment, 2s. 6½d., c.i.f. Black Malabar, spot, 3s. 5d. per lb.; shipment quoted at 360s. per cwt., c.i.f.

PODOPHYLLUM. — Spot per cwt.: *Emodi*, 235s. (225s., c.i.f.).

QUILLAIA. — For shipment, 135s. per cwt. c.i.f.; spot, 125s.

RHUBARB. — Manufacturing grades offered at from 5s. to 8s. 6d. per lb., other grades at 12s. 6d. and 15s. 6d.

SAFFRON. — Mancha superior spot, 625s. to 650s. per lb. as to holder. Replacements quoted up to 700s.

SEEDS. — (Per cwt.) ANISE. — Spanish, 250s., duty paid, nominal. CARAWAY. — Dutch, 135s., duty paid. CELERY. — Indian, 180s., spot; shipment, new-crop (June-July), 145s., c.i.f. quoted with business reported under that figure. CORIANDER. — Moroccan, 56s., duty paid; shipment, new-crop (June-July), 45s. 6d., c.i.f.; Rumanian whole quoted at 52s. 6d., c.i.f. CUMIN. — Cyprian, 325s.; Indian, 290s.; Moroccan, 310s.; shipment: Indian, 245s.; Moroccan new-crop for June-July, advanced to 215s., c.i.f. DILL. — Indian, 110s.; shipment, 87s. 6d., c.i.f. FENNEL. — Chinese, 130s., duty paid; Indian nominal, 200s.; shipment, Chinese, 110s., c.i.f.; Indian, 160s., c.i.f. FENUGREEK. — Moroccan, 47s. 6d., duty paid; shipment new-crop (June-July) dearer at 37s., c.i.f. MUSTARD. — English, 50s. to 80s., according to quality.

SENNA. — (Per lb.). Tinnevely LEAVES spot: Prime No. 1, 2s.; prime No. 2, 1s. 8d.; No. 3, f.a.q., 1s. 2d. Shipment: No. 3, 1s., c.i.f. PODS: Tinnevely hand-picked, 1s. 8d. to 2s. as to quality; spot, manufacturing, 1s. 2d.; shipment, 11d., c.i.f. Alexandria PODS: small parcels on spot of hand-picked at 8s. 6d. and 10s.; manufacturing, forward, 2s. 7½d., c.i.f.

TURMERIC. — Madras finger on spot is 140s. per cwt.; shipment, new crop quoted at 115s., c.i.f. for May-June.

WAXES. — (Per cwt.). Bees' — Dar-es-Salaam, 450s.; shipment, 425s. Sudanese, spot, 400s., in bond; shipment, 385s., c.i.f. CANDELLA, spot, 465s.; forward, 460s. landed. CARNAUBA, fatty grey, spot, 320s.; shipment, 297s. 6d., c.i.f.; prime yellow spot, 650s.; shipment, 600s., c.i.f.

Essential and Expressed Oils

ALMOND. — Imported sweet oil is 7s. per lb. spot.

AMBER. — Rectified on the spot, 2s. per lb.

ANISE. — Chinese, 9s. 10½d., spot, shipment, 9s. 8d., c.i.f.

BAY. — West Indian, 35s. per lb. on the spot.

BERGAMOT. — Spot quotations for best oil are from 100s. per lb.

BIRCH TAR. — Rectified, 3s. per lb.

BOIS DE ROSE. — Brazilian spot, from 16s. 6d.; shipment, 15s. 6d., c.i.f.

BUCHU. — Spot, from 280s. to 360s. per lb.

CADE. — Spanish from 2s. per lb. for drum lots.

CAJUPUT. — Spot from 100s. per lb.

CALAMUS. — Spot, from 70s. to 100s. per lb. as to origin.

CAMPHOR, WHITE. — Chinese for shipment, 4s. 6d., c.i.f., per kilo; spot, 6s.

CEDARWOOD. — American from 7s. 6d. per lb. on the spot; East African, 7s. 6d.

CITRONELLA. — Ceylon, spot, 6s.; shipment, 5s. 7d. per lb., c.i.f.; Formosan, 4s. 10½d., in bond; shipment, 4s. 9d., c.i.f.; Chinese, spot, 4s. 10½d. in bond; shipment, 4s. 9d., c.i.f.

CLOVE. — Madagascar leaf for shipment, 5s. 8d., c.i.f.; spot, 6s. 1½d., in bond. Rectified, 10s. Distilled, bud-oil, ENGLISH B.P., 26s. per lb. for 1-cwt. lots.

COD-LIVER. — B.P. in 45 gall. drum is 11s. 6d. per gall, including 30s. deposit on drum. Veterinary is from 9s. 6d. per gall, 25-stone lots. Delivered terms.

DILL. — Imported is from 34s. to 39s. per lb., spot.

EUCALYPTUS. — B.P. 70-75 per cent., 5s. 9d. per lb.; 80-85 per cent., 6s. 3d.

FENNEL. — Spanish sweet, 16s. 6d. per lb., landed, duty paid.

GERANIUM. — Bourbon, 87s. 6d. to 92s. 6d., spot.

GINGER. — Imported (per lb.): Indian, 165s.; Chinese, 75s.; Jamaican, 132s. 6d.

JUNIPER. — B.P.C. is 32s. 6d. per lb. JUNIPER WOOD, from 6s.

LEMON. — Sicilian from 20s. to 28s.

LEMONGRASS. — Spot, 8s. 6d. per lb.; shipment, 8s. 4½d., c.i.f.

NUTMEG. — East Indian B.P. oil is about 40s. per lb. English distilled, 70s.

OLIVE. — For shipment: Spanish, £235-£240 per metric ton, f.o.b. Spanish port. Tunisian, £250 to £255 per metric ton, c. and f., London. Spot, £300 to £310 per long ton ex wharf.

PALMAROSA. — Shipment, 50s. per lb., c.i.f.; spot, 54s.

PEPPERMINT. — *Arvensis*: Chinese for shipment, 11s. 6d., c.i.f.; spot, 11s. 9d. Brazilian for shipment, 11s. 9d., c.i.f.; spot, 11s. 9d. *Piperita*: Italian, 48s. to 60s., spot, American from 35s. per lb. as to make.

ROSEMARY. — Spanish, 13s. 9d. per lb. duty paid.

SANDALWOOD. — Mysore, spot nominal. East Indian for shipment, 112s., c.i.f.

UNITED STATES REPORT

NEW YORK, MAY 25: The upward price trend in TIN SALTS has been resumed following a brief period of stability in the market. Among ESSENTIAL OILS the price of PATCHOULI rose to \$9 per lb. (from \$8.25); NUTMEG \$8.35 (\$8); and BERGAMOT \$18.85 (\$16.50). Among the declines were SANDALWOOD at \$18 (against \$18.75); and BOIS DE ROSE, \$2.20 (\$2.30).

TRADE MARKS

APPLICATIONS ADVERTISED
BEFORE REGISTRATION

From the "Trade Marks Journal," May 12

For fertilisers for sale in England, Scotland and Wales (1)

FISONS TIP TOP, 794,901, by Fisons, Ltd., Felixstowe, Suffolk.

For chemical preparations for use as ingredients in the manufacture of toilet preparations and of cosmetics (1)

AQUALON, 863,879, by Goya, Ltd., London, W.1.

For chemical products for use in the manufacture of cosmetics, but not including boron or compounds containing boron (1)

DEHYTON, 870,421, by Dehydagdeutsche Hydrierwerke, G.m.b.H., Dusseldorf, Germany.

For chemical products for use in industry, science and photography, none being for export to and sale in Puerto Rico (1) and for detergents (not for use in industrial and manufacturing processes); preparations and substances for laundry use; cleaning, polishing, scouring and abrasive preparations; none being for export to or sale in Puerto Rico (3)

DETERSHELL, 867,214-15, by Shell International Petroleum Co., Ltd., London, S.E.1.

For detergents being dish washing compounds (3)

MACH, B863,077, by Diversey (U.K.), Ltd., London, W.1.

For non-medicated toilet preparations and cosmetic preparations (3)

Device with word ALGEMARIN, 857,225, by Prof. Sauerbruch-Preparate, K.G., Berlin, Germany.

For hair lacquer (3)

LI-LACQ, B867,459, by Creamix Carefree Compounds, Birmingham, 23.

For perfumes, non-medicated toilet preparations, cosmetic preparations, dentifrices, and soaps, all being goods for sale in the United Kingdom (3)

CUSSONS SWEET AND LOVELY, 871,778, by Cussons Sons & Co., Ltd., Manchester, 7.

For pharmaceutical preparations containing sulphonamides (5)

SULFABORACYL, 857,375, by Andreas Evriani Papanicolas, Athens, Greece.

For bandages and medical and surgical dressings, all made of plastics; and plastics prepared for use in dentistry (5)

PALASIV, PALAMED, PALACOS, 857,563-65, by Kulzer & Co., G.m.b.H., Bad Homburg van der Hohe, Germany.

For pharmaceutical preparations for the treatment or alleviation of coughs (5)

TUSSIBOND, 866,447, by Fisons Pharmaceuticals, Ltd., Loughborough, Leics.

For pharmaceutical and sanitary substances; bandages, plasters and tapes, all for surgical purposes and all being adhesive (5)

PELLOPLAST, 869,197, by Industrial Science, Ltd., Folkestone, Kent.

For sanitary substances; disinfectants; preparations for killing weeds and destroying vermin (5)

LACIDEM, 868,232, by American Cyanamid Co., Wayne, New Jersey, U.S.A.

For pharmaceutical preparations (5)

TERPHALCO, 869,762, by Roderick Dhu, Ltd., Bradford, Yorks. PARAPHYL, 873,113, by Bailly, Ltd., Wembley, Middlesex.

For pharmaceutical preparations and substances (5)

TREPS, 871,256, by The British Drug Houses, Ltd., London, N.1.

For all goods (5)

VORENE, 871,305, by Cella Landwirtschaftliche Chemikalien, G.m.b.H., Ingelheim on Rhine, Germany. MOGINT, 871,461, by C. H. Boehringer Sohn, Ingelheim on Rhine, Germany.

LYPRO, 873,713, by British Glues and Chemicals, Ltd., London, W.C.1. KLISMACOL, 873,837, by Damancy & Co., Ltd., Ware, Herts.

For pharmaceutical preparations and substances for human use and for veterinary use (5)

METOSYN, 875,311, by Syntex Corporation, Panama.

For pharmaceutical products (5)

COREPTIL, 874,476, by Michel Delalande, Paris, France

For analgesics (5)

COOLPRIN, 875,877, by T. J. Smith & Nephew, Ltd., Hull, Yorks.

PATENTS

COMPLETE SPECIFICATIONS ACCEPTED

From the "Official Journal (Patents)," April 14

Dry shaver, J. Godefroy, 993,526.

Veterinary anthelmintic compositions comprising phosphoramidates. Aspro-Nicholas, Ltd. 993,528.

Dihydrodibenzothiazepines. Olin Mathieson Chemical Corporation, 993,529.

Substituted 1,5-diarylpyrroles. Parke, Davis & Co., 993,545.

Production of photographic copies. A. Corona. 993,565.

Phenoxyalkylguanidines and their synthesis and pharmaceutical preparations containing them. Wellcome Foundation, Ltd. 993,581.

Substituted sulphonamides and process for preparing the same. Mead Johnson & Co. 993,584.

Steroid compounds, processes for their preparation and compositions containing them. Roussel-Uclaf, 993,588.

Insecticidal compositions. Cooper, McDougall & Robertson, Ltd. 993,591.

British patent specifications relating to the above will be obtainable (price 4s. 6d. each) from the Patent Office, 23 Southampton Buildings, Chancery Lane, London, W.C.2, from May 26.

From the "Official Journal (Patents)," April 22

Antiviral compositions comprising adenine derivatives. Upjohn Co. 993,601.

P-reparation of alcohols. Shell Research, Ltd. 993,609.

Process for preparing 1,2-di-amino cyclohexane and its derivatives. Reanal Finomvegyzsgyar. 993,619.

Alkyl-benzene sulphonates. Rheinpreussen, A.G., für Bergbau und Chemie, 993,630.

Preparations for the treatment of bovine mastitis. Beecham Research Laboratories, Ltd. 993,661.

Salts of acetylsalicylic acid, their production and pharmaceutical preparations containing them. Hassk. Apotekare Paul Nordstroms Fabriker, A.B. 993,682.

Process for producing L-glutamic acid by fermentation. Asahi Kasei Kogyo, K.K. 993,699.

Sampling device for gastro-intestinal fluids. National Research Development Corporation. 993,734.

Amino-alkane phosphonates. Rohm & Haas Co. 993,741.

4-Azophenthiazine derivatives. Deutsche Gold- und Silber-Scheideanstalt, 993,748.

Production of colour photographic images. Gevaert Photo-Producten, N.V. 993,749.

2-Tropanol esters. Sterling Drug, Inc. 993,753.

Thyromimetic compounds. Smith Kline & French Laboratories, 993,754.

11,12-Epithiosteroids of the pregnane series and their preparation. Shionogi & Co., Ltd. 993,760.

Photographic sensitive papers. Kodak, Ltd. 993,781.

Compositions for combating plant parasitic nematodes. J. R. Geigy, A.G. 993,804.

Heterocyclic thianthiol-phosphoric and phosphonic acid esters and processes for the production thereof. Farbenfabriken Bayer, A.G. 993,813.

Compositions for inhibiting plant growth. Farbenfabriken Bayer, A.G. 993,906.

Heptachloro-methylene-tetrahydroindane insecticides. Shell Internationale Research Maatschappij, N.V. 993,909.

Derivative of 1,3,4-methano-2H-cyclobutened) pentalen-2-ol. Allied Chemical Corporation. 993,910.

Production of unsaturated aliphatic aldehydes. Distillers Co., Ltd. 993,921.

Hair colouring methods and compositions. Revlon, Inc. 993,923.

Tetra-acetic acid derivative. J. R. Geigy, A.G. 993,936.

Container for film rolls. Gevaert Photo-Producten, N.V. 993,938.

Detergent compositions and preparation thereof. Chemical Services (Pty.), Ltd. 993,980.

Method of artificially producing ergot. Spofa, Sdruzeni Podniku pro Zdravotnickou Vyrobu. 993,982.

Photographic contact printing and developing machine. International Business Machines Corporation. 994,007.

Device for rendering pulse beats audible to the

human ear. Amalgamated Dental Co., Ltd. 994,049.

Amino steroids and processes for their preparation. Roussel-Uclaf, 994,008.

Method for determining the amine content in aqueous liquids. Houseman & Thompson, Ltd. 994,051.

Process for producing sulphuric acid. Metallgesellschaft, A.G. 994,070.

Method of making projection transparencies. Minnesota Mining and Manufacturing Co. 994,072.

Apparatus and methods for measuring oxygen tension in bone. C. F. Woodhouse. 994,077.

Method for producing 2-keto-L-gulonol acid. Takeda Chemical Industries, Ltd. 994,119.

Razors. Philip Morris, Inc. 994,129-30.

Intra-uterine contraceptive. Mount Sinai Hospital Research Foundation, Inc. 994,160.

Cyclohexylamine borates and their use as corrosion inhibitors. United States Borax and Chemical Corporation. 994,164.

Photographic colour printing. Ilford, Ltd. 994,165.

Hydrated magnesium carbonates and their production. Merck & Co., Inc. 994,199.

Plant containers treated with systemic pesticides. Imperial Chemical Industries, Ltd. 994,200.

Manufacture of ethylene diamine. Produits Chimiques Pechiney-Saint-Gobain, 994,209.

Apparatus for washing bottles and like containers. Dawson Bros., Ltd., G. Dawson and D. Dawson. 994,232.

Adjustable injector razor. Philip Morris, Inc. 994,234.

Phosphorus-containing esters. Farbenfabriken Bayer, A.G. 994,248.

Personal sanitary conveniences and drainage devices. Kimpax Surgical, Ltd. 994,274.

Cap structure for bottles or the like containers. West Co. 994,311.

Antibiotic bluenin and the manufacture thereof. Upjohn Co. 994,319.

Pteridine compounds and processes for their preparation. Smith Kline & French Laboratories, 994,350.

Detergent compositions. Domestos, Ltd. 994,353.

British patent specifications relating to the above will be obtainable (price 4s. 6d. each) from the Patent Office, 23 Southampton Buildings, Chancery Lane, London, W.C.2, from June 2.

From the "Official Journal (Patents)," April 28

Removal of organic substances and inorganic ions from liquids. C.K.D. Dukla, Narodni Podnik, 994,374.

Substituted ammonium humate and process of making same. National Lead Co. 994,377.

Separation of crystals from solutions. Badische Anilin- & Soda-Fabrik, A.G. 994,379.

Preparation of dicyanoethylated fatty amines. Armour & Co. 994,382.

Process for the preparation of deuterium-enriched amines. F. Klein and K. Bar-Eli. 994,383.

Device for cleaning teeth. M. F. Levenson. 994,392.

Process for the production of gaseous monomeric formaldehyde. Farbenfabriken Bayer, A.G. 994,398.

Process for the preparation of 6-aminopenicillanic acid and ampicillin. Farbenfabriken Bayer, A.G. 994,402.

Process for the manufacture of fluorinated steroids. CIBA, Ltd. 994,406.

Selective herbicide suitable for use in rice culture. Shell Internationale Research Maatschappij, N.V. 994,407.

Production of benzoic acid. Standard Oil Co. 994,414.

Dolomite. Dolomitewerke, G.m.b.H. 994,415.

Glycuronic acid compounds and a process of manufacturing same. Rotta Research Laboratorium, S.p.A. 994,419.

Process for the manufacture of 1:3-dialkyl-cyclobutenolones. Wacker-Chemie, G.m.b.H. 994,431.

Lysergic acid amide derivatives. Sandoz Patents. Ltd. 994,486.

Tropine derivative. Lepetit, S.p.A. 994,493.

Quaternary ammonium glycol monoborate salts. United States Borax & Chemical Corporation. 994,496.

British patent specifications relating to the above will be obtainable (price 4s. 6d. each) from the Patent Office, 23 Southampton Buildings, Chancery Lane, London, W.C.2, from June 10.

PRINT AND PUBLICITY

PRESS ADVERTISING

A WIDE range of chemists' goods are being advertised in *Woman's Own* during June. Details of the products and the type of announcement are given elsewhere in this issue.

GIBBS PROPRIETARIES, LTD., Hesketh House, Portman Square, London, W.1: Signal toothpaste. In women's magazines and national daily Press.

HENRY MILWARD & SONS, Redditch, Worcs: Milward Courier cordless electric shaver. In national newspapers, weekend colour magazines, quality journals and specialist business and sporting magazines.

MYRAM PICKER, LTD., Surbiton, Surrey: Miners cosmetics. In *Fabulous*, *Boyfriend*, *Jackie*, *Valentine*, *Honey*, *Showtime* and *ABC Film Review*.

PUBLICATIONS

Booklets and Leaflets

HOWARDS OF ILFORD, LTD., Ilford, Essex: "Cyclohexanone" (32-p. booklet).

SHEPHERD'S AEROSOLS, LTD., Shernfold Park, Frant, Tunbridge Wells, Kent: Aerovap (4 pp.).

WHITMOYER-REED, LTD., Hertford Road, Barking, Essex: "Whitmoyer Poultry Health Manual" (60-p. booklet).



"INSTANT POP-UP" SHOWCARD: The showcard illustrated, which has been produced for Deb Chemical Proprietaries, Ltd., Spencer Road, Belper, Derbys, makers of Swarfega antiseptic hand cleanser, is of a new type. It erects itself merely by being pulled out of the bag in which it is supplied. The card is a replica of the 4s. 8d. Swarfega tin. It is available free from wholesalers or direct.

WORLD TRADE

German Drug Export Prospects.—The German pharmaceutical industry's association, which represents 680 enterprises accounting for 95 per cent. of the industry's output, takes a pessimistic view on future export chances. The uncertain situation in the near East was adding to difficulties because pharmaceutical industries were nationalised there, or were going to be, and that would have its impact on German exports, they say. According to the association's chairman the West German pharmaceutical industry ranks third behind that of the United States and Japan. Its production amounted to DM.3,400 millions in 1964 (about £300 millions).

MISCELLANEOUS

INQUIRIES

Sodium Iodide Injection

Can you suggest a method for keeping sterile injection solution of sodium iodide 10 per cent. for x-ray use? The solution must at present be freshly prepared because it either (a) liberates iodine and turns brown or (b) remains clear but becomes inactive.

SODIUM iodide solution is liable to oxidation, and the free iodine produced gives a yellow or brown solution. The oxidation cannot be prevented by sodium metabisulphite which, in fact, aids the decomposition, probably due to its activity. Darkening is minimised by replacing the air in the container with nitrogen. There appears to be no evidence that sodium iodide solutions, in remaining clear, become inactive. It is difficult to see how they could, since they act by the radio-opacity of the iodine, and that cannot disappear from solutions.

Difficulty With an Emulsion

Can you advise me of a suitable method for preparing the following mixture:—

Aluminium hydroxide	gr. 15
Bismuth carb.	gr. 15
Mag. carb. leve	gr. 10
Mag. trisil.	gr. 10
Ol. olive	½ fl. oz.
Aq. menth. pip.	1 fl. oz.

We suggest making a primary emulsion, using ½ fl. oz. of olive oil, dr. 1 of acacia powder and dr. 2 of peppermint water. Gradually dilute with the remainder of the peppermint water. Mix the powders in a clean dry mortar and gradually triturate them with the emulsion.

Intravenous Sodium p-Aminohippurate

A solution of sodium p-aminohippurate 1 per cent., and inulin, 2 per cent., in a solution of normal saline is used intravenously to determine renal function. I have been preparing it using the aseptic technique method of sterilisation, a long and laborious method. Do you know of any reason why the solution should not be prepared by autoclaving the product to ensure final sterility, or of any difficulty that might arise, since information upon the thermostability of p-aminohippurate does not seem to be available in the majority of textbooks?

THE samples of sodium p-aminohippurate on the market in Great Britain are relatively impure and give a brown solution. A satisfactory injection may be made by neutralising p-aminohippuric acid with sodium hydroxide in water for injection and adjusting the pH to between 7 and 7.6. It is advisable to add 0.1 per cent. of sodium metabisulphite and to seal the solution under nitrogen, otherwise darkening occurs, especially on exposure to light. Such solutions can be sterilised by autoclaving. Sodium p-aminohippurate is probably compatible with inulin but it may be advisable to carry out a test of autoclaving the two substances together to see whether the inulin is hydrolysed. That could be ascertained by testing for reducing sugars. If those are present it would be best to prepare the solutions separately as sodium p-aminohippurate reacts with monosaccharides to produce glycosides and the resulting product gives false results in renal function tests.

NEW COMPANIES

LANE PHARMACEUTICALS, LTD. (P.C.).—Capital £100. To carry on the business of manufacturing, photographic and dispensing chemists, etc. Directors: Grace J. Lane, Helen J. H. Lane and Roger G. Lane, M.P.S. R.O.: Horton Road, Gloucester.

MAKINS YOUNG & CO., LTD. (P.C.).—Capital £100. To carry on the business of manufacturing chemists, etc. Subscribers: Shirley Hart and Averill Hart, R.O.: 86 High Street, Carshalton, Surrey.

MATTHEWS LABORATORIES, LTD. (P.C.).—Capital £100. To carry on the business of wholesale chemists and druggists, etc. Subscribers: D. Hamilton Grice and A. Kane, R.O.: 12 Whitehall, London, S.W.1.

MULTICHEM, LTD. (P.C.).—Capital £100. To carry on the business of wholesale or retail chemists, etc. Directors: Martin H. Jefferson, M.P.S., and Peter A. Reynolds, M.P.S. R.O.: 653 Queens Road, Sheffield, 2.

C. NEWBOULD, LTD. (P.C.).—Capital £1,000. To carry on the business of chemists, etc. Directors: Harold Holmes and Hilda Holmes, R.O.: 28 Beancroft Road, Castleford, Yorks.

ONWARD PHARMACEUTICAL SERVICES, LTD. (P.C.).—Capital £200. To carry on the business of merchants and vendors of pharmaceutical products, chemical preparations, etc. Subscribers: John H. R. Binning and Michael L. Wigram, R.O.: 53 Russell Square, London, W.C.1.

T. & L. PARKWAY, LTD. (P.C.).—Capital £100. To carry on the business of drug store proprietors, etc. Directors: Hugh W. Shillito, Francis C. S. London and Dorothy M. Cathrew, R.O.: 79 Eccleston Square, London, S.W.1.

ROGER A. S. BROWN, LTD. (P.C.).—Capital £5,000. To carry on the business of chemists and druggists, etc. Subscribers: Roger A. S. Brown, F.P.S., and Mrs. June E. Brown, R.O.: 33 Hylton Road, Sunderland.

COMING EVENTS

Items for inclusion under this heading should be sent in time to reach the Editor not later than first post on Wednesday of the week of insertion.

Monday, May 31

INTERNATIONAL HOSPITAL EQUIPMENT AND MEDICAL SERVICES EXHIBITION, Olympia, London, W.14. Until June 4.

MEDICAL EXHIBITION, Olympia, London, W.14. Until June 4.

Tuesday, June 1

DARTFORD BRANCH, PHARMACEUTICAL SOCIETY, Essex House, corner of Junction Road and Essex Road, Dartford, at 8 p.m. Film evening.

MIDDLESBROUGH BRANCH, NATIONAL PHARMACEUTICAL UNION, Vane Arms hotel, High Street, Stockton-on-Tees, at 7.45 p.m. Meeting to discuss: (a) Prices and Price-cutting; (b) Staff Training.

Wednesday, June 2

BOURNEMOUTH BRANCH, PHARMACEUTICAL SOCIETY, Post-graduate medical centre, Boscombe, Bournemouth, at 1 p.m. "Prostatectomy."

MANCHESTER PHARMACEUTICAL GOLFING SOCIETY, Cavendish golf club, Buxton, Derbyshire. Medal play for Kerfoot trophy and prize.

Thursday, June 3

CHEMICAL SOCIETY, Lecture room 2, University of East Anglia, Wilberforce Road, Norwich, at 5.30 p.m. Dr. A. M. Monro on "Chemical Approaches to Hypertension."

GUILD OF PUBLIC PHARMACISTS, Conference hall, Hospital Equipment and Medical Services Exhibition, Olympia, London, W.14, at 5 p.m. Mr. J. W. Hadgraft (group chief pharmacist, Royal Free Hospital, London, W.C.1) on "Quality Control and the Hospital Pharmacist."

Saturday, June 5

UNITED COMMERCIAL TRAVELLERS' ASSOCIATION, Royal Hall, Ripon Road, Harrogate, Yorks. Annual conference. Until June 1.



What doctors are reading about developments in drugs and treatments

IT is now possible to make a rhinovirus vaccine that will protect against colds due to experimental infection with homologous, but not heterologous, virus, according to a report of the Scientific Committee on Common Cold Vaccines. Rhinoviruses can be isolated from 20-30 per cent. of adults with common colds, but as there are many strains which are serologically distinct, a polyvalent vaccine would be required to ensure protection against the whole group. In the reported work, only one of twenty-eight volunteers vaccinated against a single strain developed a cold against eleven of twenty-three unvaccinated volunteers. It was shown that antibody resulting from vaccination persisted for twelve to eighteen months, which is as long as that resulting from experimental infection. Vaccination did not prevent sub-clinical infection and it is thought that that may be of importance in maintaining antibody at a high level. Experiments using mineral oil adjuvants (Drakeol—Arlacel) and aluminium phosphate adjuvant showed little promise. (*B.M.J.*, May 22, p. 1344.)

A REPORT from workers in Birmingham shows that indomethacin is absorbed satisfactorily from the rectum, as judged by serum levels. The investigation was carried out to establish whether suppositories of the drug might be used for patients suffering from peptic ulcers, those developing gastric intolerance to the drug, and those re-

quiring larger doses than can safely be given by mouth. (*B.M.J.*, May 22, p. 1354.)

THE case history of a patient presenting features of haemochromatosis apparently induced by excessive oral intake of iron, is described from University College Hospital, London. The patient, a 60-year-old woman, had complained of general lassitude of some six months duration. Twenty-seven years earlier she had been prescribed oral iron for anaemia and had continued to take twenty Blaud's pills a day until eighteen months previously, when she had changed to ten ferrous gluconate tablets a day. The writer says that the case apparently demonstrates that iron-overload can lead to tissue damage and a clinical picture of haemochromatosis in the absence of other noxious factors. (*B.M.J.*, May 22, p. 1360.)

METHODS for the sterilisation of medical equipment that can be used by the general medical practitioner have been investigated by a London doctor. He reports that the use of domestic pressure-cookers for sterilisation by steam under pressure, and of domestic ovens for sterilisation by dry heat is "bacteriologically safe and operationally satisfactory." Because of the variables in any particular situation, the author recommends that the processes should be controlled by the use of Browne's tubes. (*Lancet*, May 22, p. 1109.)

CONTEMPORARY THEMES

Subjects of contributions in current medical and technical periodicals.

- INTRAVENOUS REGIONAL ANÆSTHESIA. Experiences with. *Proc. roy. Soc. Med.*, May.
- TISSUE AND NERVE GROWTH-PROMOTING FACTORS. *Proc. roy. Soc. Med.*, May.
- BENZODIOXANES. Adrenergic blocking properties of some new. *Nature*, May 15.
- ANTIBIOTICS in recurrent cholangitis. *Brit. med. J.*, May 15.
- ORAL CONTRACEPTIVES and liver damage. *Brit. med. J.*, May 15.
- WOMEN CHEMISTS. Employment of, in industrial laboratories. *Science*, April 30.
- DEXTRAN in experimental pancreatitis. *J. Amer. med. Ass.*, May 3.
- CHLORDIAZEPOXIDE in the treatment of tetanus. *Lancet*, May 22.
- STERILISATION of instruments and dressings in general practice. *Lancet*, May 22.
- CHEMOTHERAPY OF TUBERCULOSIS: a bacteriologist's viewpoint. *Brit. med. J.*, May 22.
- PREVENTION OF COLDS by vaccination against a rhinovirus. *Brit. med. J.*, May 22.
- ORAL CALCIUM. Effects of upon serum lipids in man. *Brit. med. J.*, May 22.
- INDOMETHACIN: studies of absorption and of the use of indomethacin suppositories. *Brit. med. J.*, May 22.
- ADRENOCORTICAL carcinoma treated with O,P'-DDD. *Brit. med. J.*, May 22.
- EXCESSIVE ORAL IRON THERAPY causing haemochromatosis. *Brit. med. J.*, May 22.
- PROCAINAMIDE HCL. Lupus-like illness and. *J. Amer. med. Ass.*, May 10.
- PHYSICIAN RESPONSIBILITY for drug prescription. *J. Amer. med. Ass.*, May 10.
- MERCURIAL DIURETICS and edema. *J. Amer. med. Ass.*, May 10.
- A NEW AGENT for prophylaxis of tetanus. *J. Amer. med. Ass.*, May 10.
- "ANTIBIOTIC" against caterpillars. *New Scientist*, May 20.
- FOLIC ACID. Stability of, in pharmaceutical preparations. *Indian J. Pharm.*, April.
- ASCORBIC ACID. Stability of, in tablets. *Indian J. Pharm.*, April.
- THE treatment of coccidial infections in fowls by a mixture of amprolium and sulphamonomoxaline in the drinking water. *Vet. Rec.*, May 22.
- AN ORGANOPHOSPHORUS COMPOUND. Field trial with, against warble fly larvae in cattle. *Vet. Rec.*, May 22.

COMMERCIAL TELEVISION

The information given in the table is of number of appearances and total screen time in seconds. Thus 7/105 means that the advertiser's announcement will, during the week covered, be screened seven times and for a total of 105 seconds.

PRODUCT	London	Midland	North	Scotland	Wales & West	South	North-east	Anglia	Ulster	Westward	Border	Grampian	Eireann	Channel Is.
Period June 6-12														
Alka-Seltzer ...	6/180	5/150	4/120	4/120	4/120	5/150	4/120	4/120	5/150	4/120	5/150	3/90	3/90	4/120
Anadin ...	3/90	3/44	3/90	2/70	2/74	2/60	1/30	2/60	2/60	1/30	2/60	4/28	—	—
Andrews liver salts ...	1/30	1/30	2/60	1/30	2/60	2/60	3/90	3/90	3/90	5/150	3/90	3/90	—	2/60
Anne French cleansing milk ...	3/15	1/30	1/30	1/30	—	—	—	—	—	—	—	—	—	—
Askit powders ...	—	—	—	12/84	—	—	—	—	—	—	3/21	4/28	—	—
Bisodol ...	—	—	4/28	5/35	—	—	—	—	—	—	—	3/21	—	—
Carnation corn caps ...	—	—	3/21	—	—	—	—	—	—	—	—	—	—	—
Cuticura ...	2/14	2/14	2/14	2/14	—	—	—	—	—	—	—	2/14	—	—
Dentu-Creme ...	1/30	1/30	2/60	1/30	1/30	1/30	2/60	1/30	1/30	1/30	1/30	1/30	—	2/60
Fresh-air ...	3/21	3/21	3/21	3/21	3/21	3/21	3/21	3/21	3/21	3/21	3/21	3/21	—	3/21
Immac ...	1/30	1/30	2/60	2/60	2/70	3/90	1/30	1/30	2/60	1/30	—	1/30	—	1/30
Loxene shampoo ...	5/30	1/30	1/30	1/30	1/30	1/30	1/30	1/30	1/30	1/30	1/30	1/30	—	—
Nair ...	—	—	2/60	—	—	—	—	—	—	—	—	—	—	—
Radox ...	3/90	3/90	3/90	4/120	3/90	3/90	3/90	3/90	—	3/90	—	—	—	—
Rennies ...	—	2/60	—	—	—	—	2/60	2/60	—	1/30	3/90	—	—	—
Rinsead pastilles ...	—	1/15	2/30	2/30	—	1/15	—	1/15	1/15	3/45	—	—	—	2/60
SR tooth-paste ...	2/60	1/30	4/120	3/90	5/150	2/60	4/120	3/90	3/90	4/120	4/120	4/120	—	4/120
Signal tooth-paste ...	6/180	3/90	6/180	5/150	6/180	6/180	4/120	4/120	4/120	4/120	6/180	3/90	—	6/180
Sona bath additive ...	—	—	—	—	—	5/150	—	—	—	—	—	—	—	—
Sparkling Spring ...	—	—	—	—	—	2/60	—	—	—	—	—	—	—	—
Steradent ...	1/30	2/60	1/30	2/60	1/30	1/30	1/30	1/30	1/30	2/60	—	1/30	—	1/30
Vaseline petroleum jelly ...	2/45	1/15	—	—	—	1/15	—	—	—	—	—	—	—	—
Wright's coal tar soap ...	1/15	—	1/15	—	1/15	1/15	—	1/15	—	1/15	1/15	1/15	—	—

simulative price changes

AMENDING C & D
QUARTERLY PRICE LIST
FOR JUNE 1965

ne (821 McGlashan)				hospital quality				Kolyons (655 ICC)			
under single	36	0	0	1oz	6	4	—	chlorophyll			
double	(1 gross)	(1 gross)		2oz	9	11	—	toothpaste	17	8	4 5 2 4
	54	0	13 6	4oz	16	8	—	super white dental			
	(1 gross)	(1 gross)		8oz	28	6	—	cream	17	8	4 5 2 4
				16oz	51	6	—		25	3	6 4 3 4
mi (105 BTD)	18	7	4 7½	2 6	gauze plain	1yd	4 0	—	Lanoxin (208 BW)		
ling lotion					3yd	5 8	—	tablets 0.0625mgm 100			
ope (Weil (960 ADP))					1yd	9 11	—	Lanoxin-PG (208 BW) 1½sl			
um bath	—	—	30	0	3yd	22 2	—	tablets 100 38	0	—	4
rum de toilette	2oz	21	0ea	5 1½ea	6 37	6		Mazda (12 AEI)			
	4oz	31	6ea	7 8ea	56	0		flash bulbs capless			
	8oz	50	0ea	12 2ea	91	0		No. 1	—	—	9
ffusette	2oz	23	6ea	5 9ea	42	0		Miners (876 MP)			
	3½oz	33	9ea	8 3ea	59	6		lipstick	18	10	4 8½ 2 9
ecret de Venus bath oil								Mu-Cron (657 IL) tablets 1½s7			
bobines	12 66	0ea	16 1ea	120	0	0		Nestle (451 F&J)			
	1 5	6ea	1 4ea	10	0	0		Natural Net 16oz	65	4	16 4 9 6
	½oz	15	3ea	3 9ea	27	6		Panok (142 BML)			
	½oz	26	0ea	6 4ea	46	6		tablets	18	18	0 — 2 3
	1oz	46	9ea	11 5ea	82	6			12	—	—
	2oz	84	6ea	20 7ea	147	6		Pinaud (984 Pinaud) (distributors 451 F&J)			
	4oz	158	6ea	38 8ea	277	6		lipstick slimline	37	8	9 5 5 6
y Life (1499 BLP)								Preparation "H" (655 ICC)			
by squares								ointment	34	0	8 6 4 6
muslin	(12) 24 x 24in	18	6ea	—	24	9		Pyrex (1508 Jobling)			
	(6)	9	6ea	—	12	11		baby set	118	0	17 0 15 4
terry popular	(12) 24 x 24in	23	6ea	—	30	9		feeding bottle 4oz	15	3	— 1 11
	(6)	12	0ea	—	16	0		8oz	17	3	— 2 2
standard (12)	(6)	30	3ea	—	40	6		measuring jug ½pt	41	3	4 0 5 6
		15	6ea	—	21	0		1pt	54	9	5 0 7 3
		5	6	—	8			Reudel (655 ICC)			
by teats								bath salts	18	11	4 9 2 6
id-Aid (672 Johnson)								Salvelox (1327 WLL) (distributors 1524 Chembro)			
trip dressing	2½ x 6in	4	3	—	6			Sanella (810Maw) sanitary towels			
	(110B) tablets							No. 0	150-03	19	5 — 2 0
andra (Weil (960 ADP))								No. 1	150-00	21	8 — 2 3
ecret de Venus bath oil								No. 2	150-01	23	9 — 2 8
bobines	12 66	0ea	16 1ea	120	0	0		soluble	19	6	— 2 0
	1 5	6ea	1 4ea	10	0	0		Sea Witch (509 Gibbs)			
	½oz	15	3ea	3 9ea	27	6		hair colourant	34	1	8 6½ 4 11
	½oz	26	9ea	6 4ea	46	6		Silcot (786 MacDonald)			
	1oz	46	9ea	11 5ea	82	6		sanitary briefs			
	2oz	84	6ea	29 7ea	147	6		chic ex. large	66	4	6 7½ 7 11
	4oz	158	6ea	38 8ea	277	6		Silsan (786 MacDonald) sanitary towels			
ex (1164 55L) sanitary towels								size 1	6	10 11	— 1 2
uper soft	12 18	4	—	2 0				No. 0	12	21	0 — 2 3
	18 26	9	—	2 11				2	12	24	11 — 2 8
	6	—	—	—				Sunsilk (509 Gibbs) shampoo			
or (786 MacDonald)								cream magnum	29	1	7 3½ 3 11
andage w.o.w.								tonic magnum	29	1	7 3½ 3 11
1 in x 3yd	2	7	—	4							
1½in x 4yd	4	0	—	6							
2in x 4yd	5	0	—	7							
2½in x 4yd	5	11	—	8½							
3 in x 4yd	6	11	—	10							
4 in x 6yd	12	8	—	1 6							
6 in x 6yd	18	6	—	2 2½							
bandage triangular unbleached											
54in x 38in	14	10	—	—							
cotton wool absorbent											
½oz	5	7	—	8							
1oz	7	5	—	11							
2oz	12	1	—	1 5							
4oz	21	0	—	2 6							
8oz	37	3	—	4 6							
16oz	69	0	—	8 3							
non-absorbent											
1lb	34	0	—	4 0							

THIS WEEK'S CHANGES

Prices are given in the sequence: Trade price per doz./purchase tax per doz./retail price (bold if maintained), thus:—17s 11d/4s 3d/2s 3d. A dash — in any column indicates that the manufacturer has provided no figure appropriate to that column.

trapid (436 Evans) 1½s7	10	6ea	—	15	0	terry squares			
insulin 40 units/ml						24 x 24in (12)	31	2ea	41 7
10mils 43 11	—	4 10				Bell & Howell (1027 Rank)			
80 units/ml						cine camera 8mm			
10mils 84 9	—	9 5				Autoset 11 390	—		399 0
quacell (1553 Contactasol)						A Bi-Citrol (1336 WJ&C)			
contact lens carrying case						granules	80	0	20 0 11 8

when prescriptions call for INSULINS, supply

WELLCOME



• SOLUBLE • LENTE • PROTAMINE ZINC • GLOBIN

BURROUGHS WELLCOME & CO. (The Wellcome Foundation Ltd.) LONDON

•	Butazone (1515 CD) †s48		—	—	—	7 1/2 in double sided	7 6	1 10 1/2	—	•	Oil of the Night (358 D&S)				
	tablets 100mgm	100 13 6ea	—	—	—	combs styling	7 6	1 10 1/2	—		(home)	20oz 116 4	34 0		
•		500 65 0ea	—	—	—	all purpose	6 8	1 8	1 0	•	(vet.)	20oz 116 4	34 0		
		1000 128 0ea	—	—	—	brush & tail	6 0	1 6	1 1		3oz & 26oz				
	200mgm	100 26 0ea	—	—	—	combined mirror,				•	Old Spice (1131 Shulton)				
	500 128 0ea		—	—	—	brush & tail	8 0	2 0	1 4		aerosol	deodorant 3872	62 0	15 1	
A	Buttercup (415 Ellis)					hair rollers				•	hair cream	tube 3042	31 0	7 7	
	syrup	18 4	4 7	2 5		bouffant 6doz.	9 0ea	2 3ea	2 9		Oxymycin (1515 CD) T5	syrup 2oz	6 9ea		
•	Contactasoak (1553 Contacasol)					No. 0	12 14 8	3 8	2 3	•	tablets/capsules	100 104	6ea		
	contact lens	26 8	6 8	3 6		No. 00	10 14 8	3 8	2 3			250 259	0ea		
•	Contactasol (1553 Contacasol)					No. 1	8 14 8	3 8	2 3	•	Quickies (451 F&J)				
	soaking solution	100cc 92 0	—	11 6		No. 2	6 14 8	3 8	2 3		Baby Quick	cream pads 22	4	5 7	
•	Contactasol (1553 Contacasol)					No. 3	4 14 8	3 8	2 3	•	Rapitard (436 Evans) †s7	insulin 40 units/ml			
	contact lens	50cc 84 0	—	10 6		No. 2/T	6 14 8	3 8	2 3			80 units/ml	61 6		
D	Cuticura (993 PD&C)					No. 4/T	3 14 8	3 8	2 3	•	Robinson's (285 Colman)				
	(distributors 885 N&P)	2050				No. premium	7 14 8	3 8	2 3		low calorie	drinks 26oz	25 0	3 9	
A	Dapsodine (358 D&S)					new style				A	Rubis Pompadour (1407 Jaccaz)	oil-polishing	stone 50 0	12 6	
	intramammary	12 264 0	—	33 0		medium	6 12 3	3 0 1/2	1 11		Salter (1095 Salter)	baby scales 50DP			
R	Daptamycin (894 Nicholas) T5					large	4 12 3	3 0 1/2	1 11	A		dietary scales 18D			
	capsules	60 37 8ea	9 5ea	65 11		ex. large	3 12 3	3 0 1/2	1 11			33D			
A	Dayfur M (358 D&S)					hair brush				D	Serpatonil (252 CIBA)	tablets 25			
	syringes	12 280 0	—	35 0		plastic ladies	12 4	3 1	1 11		Stal-Kosal (1336 WJ&C)	powder 100gm	84 0	21 0	
A	Day's (358 D&S)					nail brush	20 6	5 1 1/2	2 11	D	Tin-Ox (107 8H&L) tablets	60 84 0	21 0		
	black drink	2 1/2oz 40 0	12 0	6 0		soap boxes					Vaseline (256 CPL)	hair cream jar 29 1	7 3		
•	Docteur Pierre's (1407 Jaccaz)					medium	8 6	2 1 1/2	—	A		petroleum jelly			
	toothpaste	32 0	8 0	4 11		large	10 6	2 7 1/2	—			yellow jar 18 9	4 8		
A	Dyspne (1336 WJ&C)									R	shampoo cream	sachet 16 5	4 2		
	inhaler	13 2ea	—	19 9							medicated sachet 16 5	4 2			
•	Econocil V-K (1515 CD) T5									A	Vetaplasme Langlebert (1336 WJ&C)	66 0	16 6		
	granules	2oz 3 11ea	—	—							Wander (1303 Wander)	diabetic canned	fruits 8oz 18 0	—	
•	Electra-brush (1555 Corsectric)									A					
	electric hair brush	100 0ea	25 0ea	168 0											
•	Eyclear (1553 Contacasol)									A					
	eye drops	20cc 48 0	—	6 0											
•	Eyessoothe (1553 Contacasol)									A					
	eye lotion	100cc 44 0	—	5 6											
D	Fabulo (554 Haetam) existing entries									A					
	Fabulo (554 Haetam)														
•	Furan (1515 CD)									A					
	tablets 50mgm	50 23 0ea	—	—											
•	Goya (532 Goya)									A					
	Golden Girl	250 45 0ea	—	—											
R	Handjoy (485 Fulford)									A					
	hand cleanser	17 0	4 3	2 6											
•	Huskolein (358 D&S)									D					
	20oz	120 0	36 0	18 0											
D	Kition (1 Abbey)									A					
	Kition (1407 Jaccaz)														
•	Kleenex (702 KC)									A					
	kitchen towels	15 9	—	1 9											
A	Lancelot's Specific (1336 WJ&C)									A					
	112 0	28 0	14 8												
•	Manicurette (1555 Corsectric)									A					
	electric	34 8ea	8 8ea	63 0											
A	Mucinum (1336 WJ&C)									A					
	tablets	52 0	13 0	6 10											
A	Neutradonna (187 B5) †s7									A					
	powder	25gm 19 0	—	2 4											
A	Neutradonna Sed (187 B5) †s1s4a									A					
	tablets	60 53 0	—	6 11											
C	Nori (1407 Jaccaz)									A					
	midget travelling	60 56 0	—	7 0											
•	Oil of the Night (358 D&S)									A					
	(home)	20oz 116 4	34 0												
•	Old Spice (1131 Shulton)									A					
	aerosol	3872 62 0	15 1												
•	Oxymycin (1515 CD) T5									A					
	syrup	2oz 6 9ea	—	—											
•	Quickies (451 F&J)									A					
	Baby Quick	cream pads 22	4	5 7											
•	Rapitard (436 Evans) †s7									A					
	insulin 40 units/ml														
•	Robinson's (285 Colman)									A					
	low calorie	drinks 26oz	25 0	3 9											
A	Rubis Pompadour (1407 Jaccaz)									A					
	oil-polishing	stone 50 0	12 6												
A	Salter (1095 Salter)									A					
	baby scales 50DP														
D	Serpatonil (252 CIBA)									A					
	tablets 25														
A	Stal-Kosal (1336 WJ&C)									A					
	powder 100gm	84 0	21 0												
D	Tin-Ox (107 8H&L) tablets									A					
	60 84 0	21 0													
A	Vaseline (256 CPL)									A					
	hair cream jar 29 1	7 3													
•	Wander (1303 Wander)									A					
	diabetic canned	fruits 8oz 18 0	—												

C. & D. RETAIL AND DISPENSING PRICE LIST

Monthly List of Changes

The drug index for April was 273.0

Cost		Retail			
d. per	Item	16 oz.	4 oz.	1 oz.	1 dr.
		s. d.	s. d.	s. d.	s. d.
93	500 g	Adeps lane	3 0	0 11	—
156	100 g	Antim. et pot. tart. S.I.(4)	—	6 7	1 0
594	500 g	Bismuth. carbonas, B.P.C.	—	5 9	0 10
174	100 g	Bismuth. salicylas, B.P.'53	—	7 4	1 1
66	25 g	Bismuth. subgalas, B.P.C.	—	9 4	1 4
150	100 g	Bismuth. subnitras, B.P.C.	—	6 6	0 11
75	500 g	Calcii chlorid., B.P.'53	2 5	0 8 1/2	0 11

90	100 ml	Creosotum, B.P.C. '59	—	—	3 10	0 7
48	25 g	Ext. bellad. sicc S.I. (5)	—	—	6 10	1 0
102	25 g	Hydrarg. iodic. rub., B.P.C. '54 S.I. P.I. (4)	—	—	14 6	2 1
144	25 g	Hydrarg. oxid. flav., B.P.C. P.I. (8)	—	—	20 5	2 11
96	25 g	Hydrarg. perchlor. pulv., B.P.C. S.I. P.I. (4)	—	—	13 7	1 11
420	100 g	Hydrarg. subchlor., B.P.C.	—	—	18 0	2 8
348	100 g	Hydrargyrum, B.P.C.	—	—	14 11	2 1
360	100 g	Hydrarg. ammon. P.I. (8)	—	—	15 2	2 2
90	25 g	Menthol (natural)	—	—	—	1 10
78	25 ml	Ol. juniperi, B.P.C. '49	—	—	11 1	1 7
90	1 pt	Ol. olive	—	—	2 6	0 9
198	25 g	Quinin sulphas	—	—	—	4 0
438	500	Quinin. bisulphat. gr. 2	—	—	3 9	13 8
189	100	Quinin. bisulphat. gr. 5	—	—	7 9	26 8
984	1000	Quinin. sulphat. gr. 2	—	—	4 6	15 0